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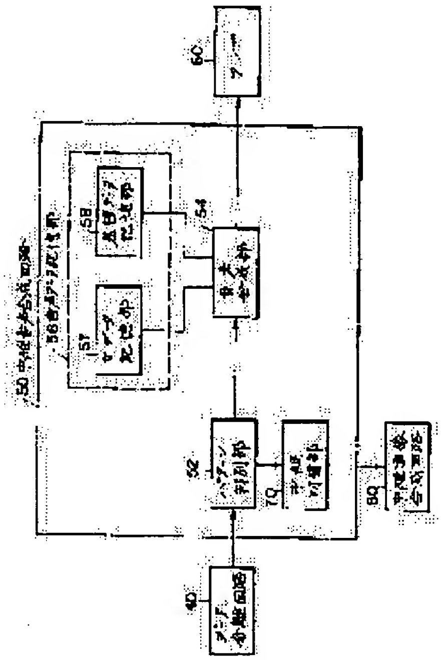
(54) ON THE SCENE BROADCASTING DEVICE FOR GAMES

(57)Abstract:
PURPOSE: To allow not only the player but watching people to enjoy themselves with a game.
CONSTITUTION: A on the scene game broadcasting device 50 performs automatically the real time broadcast following the game evolution of a game system. The device 50 comprises a voice data memory part 56 in which the specified voice data for play-by-play broadcast is previously stored in pursuit after a plurality of game evolution patterns, a pattern judging part 52 which judges the game evolution pattern of the game system and emits a read command for the voice data corresponding to the given pattern, and a voice synthesizing part 54 which reads the voice data from the memory means on the basis of the read command and synthesizes voice signals, and thereby a on the scene broadcast following the game evolution is emitted acoustically.



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CLAIMS

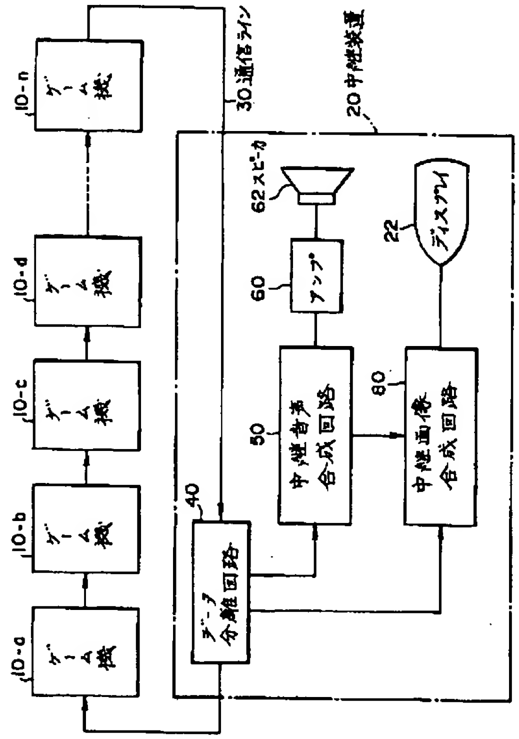
[Claim(s)]
[Claim 1] Are game play-by-play-broadcasting equipment which performs automatically play-by-play broadcasting corresponding to game expansion of a game system, and it corresponds to two or more game expansion patterns beforehand. A voice data storage means by which the predetermined voice data for play-by-play broadcasting was memorized, and a pattern distinction means to distinguish the game expansion pattern of a game system and to output the read-out command of the voice data corresponding to a game expansion pattern, Game play-by-play-broadcasting equipment characterized by carrying out the voice output of the play-by-play broadcasting corresponding to game expansion including a speech synthesis means to read the voice data for play-by-play broadcasting from said voice data storage means, and to compound a sound signal, based on said read-out command.
[Claim 2] In the multi-player game system which performs a multi-player game with two or more game machines A voice data storage means by which the predetermined voice data for play-by-play broadcasting was beforehand memorized corresponding to two or more game expansion patterns, A pattern distinction means to distinguish the game expansion pattern of said multi-player game, and to output the read-out command of the voice data corresponding to a game expansion pattern, Game play-by-play-broadcasting equipment characterized by performing automatically play-by-play broadcasting corresponding to game expansion including a speech synthesis means to read the voice data for play-by-play broadcasting from said voice data storage means, and to compound a sound signal, based on said read-out command.
[Claim 3] In either of claims 1 and 2, said voice data for play-by-play broadcasting corresponding to any one game expansion pattern at least Two or more selection mold junction data of different contents of junction are included. Said pattern distinction means While outputting the read-out command of the voice data for play-by-play broadcasting corresponding to a game expansion pattern It is formed so that the selection read-out command of said selection mold junction data may be outputted. Said speech synthesis means Game play-by-play-broadcasting equipment characterized by outputting the sound signal for play-by-play broadcasting of a multi-story which reads the voice data for play-by-play broadcasting from said voice data storage means, and broadcasts play by play by the story from which the same game expansion pattern also differs based on said read-out command.
[Claim 4] In either of claims 1-3 said voice data for play-by-play broadcasting The story voice data which constitutes the story corresponding to a game expansion pattern, and has a data area for substitution voice in a part, It is constituted so that two or more substitutable substitution voice data which constitutes the voice data of said data area for substitution voice may be included. Said voice data storage means The storage area which memorizes story voice data, and the storage area which memorizes substitution voice data are included. Said pattern distinction means While outputting the read-out command which reads the story voice data corresponding to a game expansion pattern as said voice data for play-by-play broadcasting It is formed so that the read-out command which chooses and reads predetermined data from two or more substitution voice data may be outputted. Said speech synthesis means Based on said read-out command, story voice data and substitution voice data are read from said voice data storage means as voice data for play-by-play broadcasting. Game play-by-play-broadcasting equipment characterized by inserting substitution voice data in the data area for substitution voice of story voice data, and compounding a sound signal.

[Claim 5] In claim 4 subordinate to claim 2 said two or more substitution voice data Two or more voice data for player discernment set up corresponding to the player and/or the player control unit is included. Said story voice data It is formed so that said voice data for player discernment may be inserted in said all all [a part or] for substitution voice. Said pattern distinction means Game play-by-play-broadcasting equipment characterized by reading so that the voice output of the voice data for player discernment of a predetermined player may be inserted in and carried out to the story voice data corresponding to the game expansion pattern between each player, and outputting a command.

[Claim 6] A junction image composition means to compound the game screen for play-by-play broadcasting of said multi-player game in either of claims 3-5 subordinate to claim 2 and claim 2, A display means to display said game screen for play-by-play broadcasting is included. Said junction image composition means Game play-by-play-broadcasting equipment characterized by displaying the game screen for play-by-play broadcasting which it was formed so that the game screen for play-by-play broadcasting to compound might be changed according to a game expansion pattern, and was set by said display means at play-by-play broadcasting.

[Translation done.]

Drawing selection Representative drawing


10-a ゲーム機
10-b ゲーム機
10-c ゲーム機
10-d ゲーム機
10-n ゲーム機
30 通信ライン
20 中継装置
40 データ分離回路
50 中継音声合成回路
60 アンプ
62 スピーカ
80 中継画像合成回路
22 ディスプレイ

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the game play-by-play-broadcasting equipment which broadcasts expansion of a game play by play.
[0002]
[Description of the Prior Art] The game machine which performs a drive game etc., for example is known looking at the game screen displayed on the display conventionally. Since two or more players can vie in ranking or the transit time mutually in the same game space, especially the multi-player game system constituted by connecting these game machines of each other in communication link Rhine has won popularity even for the upper person broadly from the beginner.
[0003] If game production, such as play-by-play broadcasting of a game, is performed when performing such a drive game, the interest of a game can heighten the draw of increase and a game machine further. When a multi-player game system performs a drive game etc. especially, by performing the same play-by-play broadcasting as an actual ball race, not only a player but the gallery which does not participate in a game can enjoy a game, and can get a higher customer effect.
[0004] However, there was no game play-by-play-broadcasting equipment which performs automatically play-by-play broadcasting corresponding to game expansion in a game system conventionally.
[0005] Moreover, in the circuit ball-race mold game which runs a predetermined circuit course while a player shows up in the racing car for games and actually operates, play-by-play broadcasting of an official in charge might be announced.
[0006] However, such play-by-play broadcasting was large with [by the official in charge / qualitative] the rose, and play-by-play broadcasting by the unfamiliar official in charge had the problem of reducing game production and reducing the draw of a game on the contrary.
[0007] Moreover, although placing an official in charge under exclusive contract is also considered in order to always broadcast fixed quality play by play, there are problems, such as a labor cost, etc. and it is not realistic.
[0008] This invention is made in view of such a technical problem, and the purpose performs narration corresponding to game expansion automatically, and is to offer the game play-by-play-broadcasting equipment with which not only a player but a spectator can enjoy a game.
[0009]
[Means for Solving the Problem and its Function] In order to attain said purpose, invention of claim 1 Are game play-by-play-broadcasting equipment which performs automatically play-by-play broadcasting corresponding to game expansion of a game system, and it corresponds to two or more game expansion patterns beforehand. A voice data storage means by which the predetermined voice data for play-by-play broadcasting was memorized, and a pattern distinction means to distinguish the game expansion pattern of a game system and to output the read-out command of the voice data corresponding to a game expansion pattern, Based on said read-out command, the voice data for play-by-play broadcasting is read from said voice data storage means, and it is characterized by carrying out the voice output of the play-by-play broadcasting corresponding to game expansion including a speech synthesis means to compound a sound signal.
[0010] According to invention of claim 1, the voice data for game play-by-play broadcasting corresponding to two or more game expansion patterns is beforehand memorized for the voice data

storage means.

[0011] And when a pattern distinction means distinguishes the game expansion pattern of a game system, a speech synthesis means will read the play-by-play-broadcasting voice data corresponding to a game expansion pattern from a voice data storage means, and it will carry out the voice output of the play-by-play broadcasting corresponding to game expansion.

[0012] Thus, to compensate for expansion of a game situation, play-by-play broadcasting is carried out to real time. For this reason, the ambient atmosphere of the game itself can be enlivened, the agitation and presence which a player tastes can be raised, and further, not only a player but a spectator (gallery) can enjoy a game, and becomes possible [heightening the draw of the game machine itself].

[0013] Especially, in this invention, since the game expansion situation which became only a player from ** until now also gets across to a surrounding gallery, not only a player but a gallery can enjoy the game itself, and it becomes possible [heightening the draw of a game machine also from this field]. Furthermore, according to this invention, since the voice output of the play-by-play broadcasting corresponding to game expansion is carried out automatically, an official in charge under exclusive contract becomes unnecessary, and play-by-play broadcasting of fixed quality of him is moreover always attained.

[0014] Moreover, invention of claim 2 is set to the multi-player game system which performs a multi-player game with two or more game machines. A voice data storage means by which the predetermined voice data for play-by-play broadcasting was beforehand memorized corresponding to two or more game expansion patterns, A pattern distinction means to distinguish the game expansion pattern of said multi-player game, and to output the read-out command of the voice data corresponding to a game expansion pattern, Based on said read-out command, the voice data for play-by-play broadcasting is read from said voice data storage means, and it is characterized by performing automatically play-by-play broadcasting corresponding to game expansion including a speech synthesis means to compound a sound signal.

[0015] Thus, according to invention of claim 2, while two or more players which perform a multi-player game emulate each other mutually in other players and common game space in addition to the operation effectiveness of claim 1, signs that a game is performed are broadcast play by play.

[0016] Therefore, a game becomes what became white-hot more, and each player can enjoy a game, tasting a bigger agitation and presence.

[0017] In addition, a surrounding spectator can enjoy signs that two or more players emulate each other, hearing play-by-play broadcasting.

[0018] Invention of claim 3 moreover, said voice data for play-by-play broadcasting corresponding to any one game expansion pattern at least in either of claims 1 and 2 Two or more selection mold junction data of different contents of junction are included. Said pattern distinction means While outputting the read-out command of the voice data for play-by-play broadcasting corresponding to a game expansion pattern It is formed so that the selection read-out command of said selection mold junction data may be outputted. Said speech synthesis means It is characterized by outputting the sound signal for play-by-play broadcasting of a multi-story which reads the voice data for play-by-play broadcasting from said voice data storage means, and broadcasts play by play by the story from which the same game expansion pattern also differs based on said read-out command.

[0019] Thus, according to invention of claim 3, play-by-play broadcasting of play-by-play-broadcasting **** and a multi-story also of the same game expansion pattern is attained by different story, and even if it carries out by repeating a game what times, a player can enjoy play-by-play broadcasting of contents different each time, and it raises the fun of the game itself also from this field, and it is effective [a player] in the ability to offer the game machine with which it does not get bored for a long period of time. In addition, there are a surrounding spectator and effectiveness that it can be enjoyed even if it does not actually play since play-by-play broadcasting of various expressions can be heard.

[0020] As for said pattern distinction means, in here, it is desirable to form from said selection mold junction data, so that the read-out command which reads the data of the contents of junction of arbitration at random may be outputted.

[0021] If it does in this way, since here where the data of an expression of arbitration are chosen at random will be made from the junction data of two or more expressions corresponding to the same game expansion pattern, it becomes play-by-play broadcasting which was rich in change which announcer actually performs, and it can be enjoyed, without getting bored any number of times.

[0022] Invention of claim 4 is set to either of claims 1-3. Moreover, said voice data for play-by-play broadcasting The story voice data which constitutes the story corresponding to a game expansion pattern, and has a data area for substitution voice in a part, It is constituted so that two or more substitutable substitution voice data which constitutes the voice data of said data area for substitution voice may be included. Said voice data storage means The storage area which memorizes story voice data, and the storage area which memorizes substitution voice data are included. Said pattern distinction means While outputting the read-out command which reads the story voice data corresponding to a game expansion pattern as said voice data for play-by-play broadcasting It is formed so that the read-out command which chooses and reads predetermined data from two or more substitution voice data may be outputted. Said speech synthesis means Based on said read-out command, story voice data and substitution voice data are read from said voice data storage means as voice data for play-by-play broadcasting, substitution voice data is inserted in the data area for substitution voice of story voice data, and it is characterized by compounding a sound signal.

[0023] Play-by-play broadcasting which expressed in detail the game expansion information that it changed intricately can be realized easily, without increasing the amount of data, since it substitutes by the data which prepare a variable part in the story voice data corresponding to a game expansion pattern, and change to it according to a game expansion situation according to claim 4. Therefore, a player and a gallery can know detailed game expansion information, and can enjoy a game more.

[0024] In claim 4 by which invention of claim 5 is subordinate to claim 2 moreover, said two or more substitution voice data Two or more voice data for player discernment set up corresponding to the player and/or the player control unit is included. Said story voice data It is formed so that said voice data for player discernment may be inserted in said all all [a part or] for substitution voice. Said pattern distinction means It is characterized by reading so that the voice output of the voice data for player discernment of a predetermined player may be inserted in and carried out to the story voice data corresponding to the game expansion pattern between each player, and outputting a command.

[0025] According to invention of claim 5 Since said two or more substitution voice data can be used as the voice data set up corresponding to the character name or player control unit set up corresponding to the player name or the player and can be woven into play-by-play broadcasting, a player nearby excitement can be carried out and a game can be enjoyed. Moreover, when the acquaintance of a player reaches a gallery and it carries out, it can be aided and enjoyed, hearing play-by-play broadcasting.

[0026] In either of claims 3-5 by which invention of claim 6 is subordinate to claim 2 and claim 2 A junction image composition means to compound the game screen for play-by-play broadcasting of said multi-player game, and a display means to display said game screen for play-by-play broadcasting are included. Said junction image composition means It is formed so that the game screen for play-by-play broadcasting to compound may be changed according to a game expansion pattern, and it is characterized by displaying the game screen for play-by-play broadcasting set by said display means at play-by-play broadcasting.

[0027] According to invention of claim 6, the junction image composition means of game play-by-play-broadcasting equipment distinguishes a game expansion pattern, changes corresponding to this, and can provide a gallery with the image which was united with voice. Therefore, as for a gallery, not only voice but the image which changes to real time can enjoy the expansion information on a game. Since the situation currently especially broadcast by play-by-play broadcasting is displayed as an image by which it is full of a feeling of tension like play-by-play broadcasting of television broadcasting, a gallery can also be excited and a high customer effect can be obtained.

[0028]

[Example] Next, the suitable example of this invention is explained to a detail based on a drawing.

[0029] One example of the multi-player mold game system by which this invention was applied is shown in drawing 1 . As for the game system of an example, game machine 10-a and 10-b— which plurality became independent of through data transmission Rhine are connected mutually, and vying in ranking in the game space as the racing car which other players control, and the computer car which a computer controls where the player racing car which a player controls is the same, each game machine 10-a and 10-b— are formed so that a game may be performed.

[0030] Here, independent game machine 10-a, 10-b, and — mean being formed so that each game machine 10-a, 10-b, and — can perform a single handicap player game independently, respectively. Of course, a multi-player game can also be performed in the same game space among other players through data transmission Rhine.

[0031] Each game machine 10 is formed like the driver's seat of an actual racing car. And a player sits down on a sheet 16, looking at the false three-dimension image (game screen) projected on the display 14, it operates the handle prepared in the control unit 12, an accelerator, a shift lever, a brake, etc., operates a fictitious racing car, and performs a game.

[0032] At this time, the pattern of this ball race is broadcast play by play to a surrounding gallery by game play-by-play-broadcasting equipment 20. That is, the voice output of the play-by-play broadcasting is carried out by the loudspeaker 62, and the play-by-play-broadcasting screen corresponding to this play-by-play broadcasting is displayed on a display 22. Thereby, not only a player but a gallery can enjoy a game. The circuitry of said game system is shown in drawing 2 . Each game machine 10-a, 10-b—, and game play-by-play-broadcasting equipment 20 are connected in the shape of a loop formation through communication link Rhine 30.

[0033] If data are received, each game machine 10 will update the data of a self-opportunity, and will transmit data to the following game machine. Each game machine 10-a and 10-b— perform various kinds of game operations based on the input signal from a control unit 12, and the predetermined game program beforehand determined as the data of other game machines inputted through communication link Rhine 30. And the game screen where **** composition of the 3D-Graphics was carried out for technique is displayed on a display 14. That is, each game machine 10 performs a game operation so that the racing car which a player controls may move the racing course 420 set up as shown in drawing 1919 in predetermined three-dimension game space. A game operation is performed so that it may naturally move on this racing course 420 also in the player racing car of other game machines transmitted through communication link Rhine 30. And perspective-projection conversion of this three-dimension game space is carried out in the plane of projection of predetermined view system of coordinates, and a game screen is formed, and it is formed so that this may be displayed on a display 14.

[0034] Therefore, each game machine 10-a, 10-b — A player can perform a game, vying other players, ranking, etc. in the racing course 420 top. Each game machine 10-a, 10-b which are transmitted to drawing 9 towards other game machines through communication link Rhine 30 — The format of the game machine data 100 is shown. Each game machine data 100 is constituted including the data of which game machine, the ID data 110 which expresses, the load position data 120 showing in which location the game functional player racing car concerned is, and the condition data 130 showing the condition of a player racing car. It is constituted so that said load position data 120 may express using the width-of-face data with which a player racing car expresses which neighborhood of the width of road it is as the distance data which met the course from the start in that of which neighborhood **** on the racing course 420. Said condition data 130 are constituted as data showing conditions, such as spin of a player racing car, and crash, course out. And according to renewal of a game screen, fundamentally, those contents will be updated every [1/] 60 seconds, and this game machine data 100 will be transmitted towards other game machines.

[0035] And each game machine 10 calculates the ball-race data shown in drawing 10 for every game machine based on the game machine data 100 of other game machines received through communication link Rhine 30. For example, it can ask for the ranking of other game machines, the distance between two cars, and the number of the circumference from the load position data 120. Furthermore, it can ask for the speed of other player racing cars by comparing the load position data 120 of the game machine data 100 received last time and the game machine data 100 received this time.

[0036] The principle Fig. of the image composition technique of this example is shown in drawing 18 .

[0037] The information about the three-dimension object 510 which appears in the three-dimension game space 500 and this three-dimension game space 500 is memorized beforehand in game machine 10-a of an example, 10-b—, and the junction image composition circuit 80 mentioned later. The image information about said three-dimension object 510 is expressed as a geometric model which consists of two or more polygons 512-1,512-2,512-3 and ....., and is beforehand memorized in memory.

[0038] If a driving game is taken for an example, the three-dimension object 510 is a racing car which appears in the three-dimension game space 500, and various kinds of three-dimension objects which, in addition to this, express the background of the racing course 420, a building 430, tunnel 432, a crest 434, a cliff 436, a wall 438, etc. as shown in drawing 19 are arranged in the three-dimension game space 500.

[0039] Said racing course 420 has two or more corner sections 422, up and down or a bank is prepared by the location, and the grade separation is also prepared.

[0040] Perspective-projection conversion is carried out on the perspective-projection side 520 of view system of coordinates centering on the view 610 of a virtual player, and these three-dimension objects are displayed on a display 14 and 22 as a false three-dimension image 522. For example, if the view location of a virtual player is set as the location of the eyes of the driver of a racing car who moves in the inside of the three-dimension space 500 according to actuation of a player, on a display 14 and 22, the sight seen from the driver of the racing car will be displayed. And if a player 600 makes it a front [control unit / 12] and looks at a display 14 from a view 610, he can sit on the driver's seat of a racing car, and an image which is located in the three-dimension space 500 can be seen.

[0041] When a player 600 operates the handle of a control unit 12 etc. and rotation of the racing car on which he is virtually, advancing side by side, etc. are operated, the location of the view 610 over the three-dimension space 500 will change, and the three-dimension space 500 will rotate and advance side by side. For this reason, game operation part calculates rotation of the three-dimension object 510 which constitutes the three-dimension game space 500 based on this actuation signal and a game program and which is a racing car, or other three-dimension objects, advancing side by side, etc. on real time. And as described above, perspective-projection conversion is carried out on the perspective-projection side 520, and these three-dimensions object is displayed on a display 14 as a false three-dimension image 522 which changes on real time.

[0042] Therefore, a player 600 can carry out the virtual simulation of the condition of having participated the inside of the circuit course 420 set up in the three-dimension game space 500 in the ball race, operating a racing car, by operating a control unit 12 and controlling a racing car.

[0043] When the technique of computer graphics is used, said three-dimension object 510 is creating the geometric model using independent body system of coordinates. That is, each polygon which constitutes the three-dimension object 510 is arranged on these body system of coordinates, and that geometric model is specified.

[0044] Furthermore, the three-dimension game space 500 is constituted using a world coordinate (XW, YW, and ZW), and the three-dimension object 510 expressed using body system of coordinates is arranged in a world coordinate according to the movement model.

[0045] And by making the location of a view 610 into a zero, data are changed into the view system of coordinates which took the direction of a look in the forward direction of the Z-axis, and perspective-projection conversion of each coordinate is carried out to the screen coordinate system which is plane of projection 520. Thus, the image within the visual field of the three-dimension game space 500 which is visible from a view 610 can be displayed on a display 14 and 22.

[0046] Especially, in this example, it is formed so that the location of a view 610 can be changed into arbitration into the three-dimension game space 500 which consists of world coordinates.

[0047] For example, in drawing 18 , the image of the three-dimension game space 500 seen from player racing-car back as shown in drawing 20 (A) can be displayed by setting up a view location behind a three-dimension object, as shown in 610-A. Moreover, a game screen which looks down at the racing car under transit from the sky as shown in drawing 20 (B) can be displayed by setting up a view location above the three-dimension object 510, as shown in 610-B. In an example, each game machine 10 has set the back of a player racing car as 610-A for the view location. Moreover, based on the command from the junction electronic speech circuit 50, the junction image composition circuit 80 mentioned later is formed so that the view location 610 may be changed at any time.

[0048] And if the multi-player game by two or more players is started, the racing car which each player operates will start the multi-player game system of an example from the starting point 440. And it will run, vying in other player racing cars which entered the multi-player game in the racing course 420 top, ranking, time amount, etc.

[0049] The description of this example broadcasts play by play the situation of the racing game of the multi-player performed by doing in this way to a surrounding gallery on real time using the game play-by-play-broadcasting equipment 20 formed apart from each game machine 10-a and 10-b—, and is to have enlivened the ambient atmosphere of a game.

[0050] As shown in drawing 2 , said game play-by-play-broadcasting equipment 20 is constituted including the data separation circuit 40, the junction electronic speech circuit 50, amplifier 60, a loudspeaker 62, the junction image composition circuit 80, and a display 22.

[0051] Said data separation circuit 40 separates data required for junction image composition from the data transmitted in the communication link Rhine 30 top, and outputs them towards the junction image composition circuit 80 while it separates the data for game expansion distinction and outputs them towards an electronic speech circuit 50 out of the data transmitted in the communication link Rhine 30 top.

[0052] Based on the data inputted from the data separation circuit 40, the junction electronic speech circuit 50 distinguishes game expansion, and it is constituted so that the play-by-play-broadcasting sound signal corresponding to game expansion may be outputted from a loudspeaker 62 through amplifier 60. In addition, the junction electronic speech circuit 50 of an example turns and outputs the junction image composition command corresponding to game expansion to the junction image composition circuit 80.

[0053] Said junction image composition circuit 80 calculates the same three-dimension game space as said each game machine 10-a and 10-b— based on the game machine data 100 and the predetermined game program of each game machine inputted from the data separation circuit 40. And it is based on the command inputted from the junction electronic speech circuit 50, and the view location 610 in game space is set up, and it is formed so that the scene of the game space seen from said view location 610 on the display 22 may be displayed as a game play-by-play-broadcasting image.

[0054] Therefore, as shown in drawing 1 , the gallery which is present in the perimeter of game play-by-play-broadcasting equipment 20 can hear play-by-play broadcasting corresponding to game expansion from a loudspeaker 62, and can see the game screen for play-by-play broadcasting moreover displayed on the display 22 according to play-by-play broadcasting. For this reason, a gallery becomes possible [being able to enjoy the voice and the image for play-by-play broadcasting on real time, heightening the effectiveness of the whole game system customer gathering, and raising the operating ratio of a game machine].

[0055] The concrete configuration of said junction electronic speech circuit 50 is shown in drawing 3 .

[0056] The junction electronic speech circuit 50 of an example is constituted including the pattern distinction section 52, the speech synthesis section 54, the voice data storage section 56, and the junction change-over section 70.

[0057] Beforehand, corresponding to two or more game expansion patterns, the predetermined voice data for play-by-play broadcasting writes in said voice data storage section 56, and it is memorized. Said voice data is the voice of the announcer of pro FESHONARU who performs the television actual condition, such as a Formula 1 race, and it is desirable to constitute as voice data which moreover had the same rhythm and intonation as actual play-by-play broadcasting.

[0058] Moreover, in this example, the voice data for play-by-play broadcasting memorized in said voice data storage section 56 is constituted so that the voice data of the story which constitutes the story corresponding to a game expansion pattern, and has a data area for substitution voice in a part, and two or more substitutable substitution voice data which constitutes the voice data of said data area for substitution voice may be included.

[0059] And in order to memorize such voice data, the voice data storage section 56 of an example is constituted including the main data storage section 57 which memorizes two or more story voice data corresponding to a game expansion pattern, and the substitution data storage section 58 which memorizes said substitution voice data.

[0060] The example of the story voice data 700 memorized in the main data storage section 57 is shown in drawing 6 , drawing 8 , drawing 12 - drawing 17 . It is square among drawing and the area [surrounding] 800 is a data area for substitution voice.

[0061] As shown in drawing 8 , a part of this story voice data 700 is constituted so that two or more selection mold junction data 710A of different contents of junction and 710B— may be included. And the selection output of the one data is carried out at random from two or more of these junction data 710A and 710B—.

[0062] Therefore, the same game expansion also becomes that from which the contents of the play-by-play broadcasting differed each time, and play-by-play broadcasting by which weariness does not come for a player and a gallery can be performed.

[0063] Said pattern distinction section 52 calculates the ball-race data shown in drawing 10 for every player racing car based on the data inputted from the data separation circuit 40, and it is constituted so that a game expansion pattern may be distinguished. And the pattern distinction section 52 turns and outputs the game expansion pattern corresponding to the distinguished game expansion pattern distinguished while reading and turning and outputting a command to the speech synthesis section 54 to the junction change-over section 70.

[0064] An example of the fundamental game expansion pattern which the pattern distinction section 52 distinguishes is shown to drawing 4 by the flow chart.

[0065] First, a game system is controlled by the entry mode of two or more game machine 10 — shown in drawing 2 in which the entry of fixed time amount and other game machines 10 will be received if coin is thrown in for any being. The pattern distinction section 52 judges that the game system became this entry mode based on the inputted data. And the read-out command of the voice data for play-by-play broadcasting for entry modes is outputted according to the flow chart shown in drawing 5 R> 5 (step 300).

[0066] Moreover, after entry mode is completed, a game system starts the count-down actuation for a start of a player racing car next. The pattern distinction section 52 distinguishes the mode before this start, and outputs the voice data read-out command for front [start] play-by-play broadcasting according to the flow shown in drawing 7 (step 400).

[0067] Moreover, a game system is controlled by the game mode in which a game is actually performed after the count-down actuation for a start is completed next. The pattern distinction section 52 judges that the game system became this game mode based on the inputted data. And according to the flow chart shown in drawing 11 , a fundamental game expansion pattern is judged and the voice data read-out command of play-by-play broadcasting of each routine shown in drawing 12 - drawing 17 based on the decision result is outputted (step 500).

[0068] Thus, the pattern distinction section 52 distinguishes game expansion of a game system, and outputs the read-out command of the voice data corresponding to game expansion to the speech synthesis section 54. In addition, as mentioned above, in the story voice data 700, the voice data area 800 for substitution is contained in the part. In such a case, the pattern distinction section 52 turns and outputs the substitution voice data read-out command corresponding to this voice area 800 for substitution to the speech synthesis section 54.

[0069] Furthermore, when said story voice data 700 contains two or more selection mold junction data 710A and 710B—, it is constituted so that the selection command to selection mold junction data may be outputted. Especially, in this example, the selection command to such selection mold junction data is performed at random each time, or it is set up so that the same data may be continued and it may not choose twice, and play-by-play broadcasting with a variation is performed.

[0070] And based on the voice read-out command inputted by doing in this way, said speech synthesis section 54 reads the story voice data 700 and substitution voice data from the main data storage section 57 and the substitution data storage section 58 as voice data for play-by-play broadcasting, inserts substitution voice data in the data area 800 for substitution voice data of the story voice data 700, and compounds a sound signal. And it is constituted so that the compound sound signal may be outputted from a loudspeaker 62 through amplifier 60.

[0071] the texture which could perform the expression of many in the number of data restricted by considering as the configuration which inserts substitution voice data in the substitution voice data area 800 of keynote voice data as especially mentioned above, and was doubled with the situation — warm play-by-play broadcasting is attained. Thus, play-by-play broadcasting generated is play-by-play broadcasting based on the data of a real time vehicle, it stagnates as real announcer is carrying out, goes on talking that there is nothing, and enables exciting play-by-play broadcasting to which it doubles with a situation and a tone is changed.

[0072] In addition, such voice data has also memorized the tone of the voice cried with the condition of a game in one voice, a quiet tone, the excited tone, etc. are used properly, it is come, since it is, a game rises and a player also carries out a gallery nearby excitement. When capacity is insufficient, you may make it use together with CD, although it has such voice data by ROM fundamentally [all] and reproduces by PCM. for example, words with the often used language long to PCM, such as using CD regenerative apparatus, when there are long words etc., or putting PCM voice and carrying out time amount earnings at the time of access, and the seldom used language — CD — ** — you may use properly.

[0073] In addition, as for said some of substitution voice data, in this example, it is desirable to set up as voice data for player discernment set up corresponding to a player or each game machine. For example, what is necessary is just to set up an identifier of a player, an identifier of a racing car beforehand set up for every game machine, an identifier of a driver, etc. which were registered before game initiation as this voice data for substitution. By doing in this way, the identifier of the racing car which the identifier of a player or a player controls will be used for play-by-play broadcasting, and a player becomes possible [performing a more nearly exciting game].

[0074] Moreover, said junction change-over section 70 is based on the game expansion pattern which the pattern distinction section 52 distinguishes, sets up the location of the view 610 in game space suitably, and outputs a view change-over command towards the junction image composition circuit 80. For example, in broadcasting play by play two sets of the racing cars which run a head, it outputs a view change-over command so that two sets of the racing cars may project on a game screen, for example, so that a view may be set up over the racing car which runs a head.

[0075] Moreover, in, broadcasting play by play the vehicle from which accident is started for example, it sets the location of a view 610 as the road side of a point which has caused accident so that the game screen of the racing car concerned may be displayed.

[0076] Thus, in this example, the inside of a game can change the view location 610 suitably according to a game expansion pattern, and can perform play-by-play broadcasting using both voice and an image.

[0077] Next, game play-by-play-broadcasting actuation of the system of this example is explained to a detail focusing on actuation of the junction electronic speech circuit 50.

[0078] Three fundamental play-by-play-broadcasting modes of this example are shown to drawing 4 that it mentioned above. First, if a player throws in coin for any of two or more game machines 10 being, a game system will serve as entry receptionist mode. At this time, the junction electronic speech circuit 50 of an example performs play-by-play broadcasting for an entry (step 300).

[0079] And termination of this entry mode sets a game system as the start mode in which count actuation for a start is performed to two or more sets of the player racing cars which entered. At this time, the junction electronic speech circuit 50 of an example performs play-by-play-broadcasting actuation before a start (step 400).

[0080] And if start mode is completed and each player racing car starts, a game system will be set as game mode. At this time, the junction electronic speech circuit 50 continues ball-race play-by-play-broadcasting actuation, and performs it until a game is completed. (Step 500)

An example of a concrete entry play-by-play-broadcasting output using the data memorized by drawing 6 at the voice data storage section 56 in the flow which shows the procedure in which the junction electronic speech circuit 50 performs entry play-by-play broadcasting to drawing 5 is shown. After the first player feeds coin into a game machine, when other players feed coin into other game machines in fixed time amount, a multi-player game can be enjoyed with two or more players. In this fixed time amount, entry play-by-play broadcasting broadcasts play by play signs that each player enters one after another.

[0081] First, if the first player throws in coin (step 310), it becomes the timer start (step 320) of this game machine 10, and repeating installation 20 will receive this timer signal, and will start entry play-by-play broadcasting (step 330).

[0082] The example of the story voice data memorized by the main data storage section 57 of the voice data storage section 56 as 700-330,700-350 is shown in drawing 6 (B). For example, including data 710-330A of different contents table ****** of junction, 710-330B, and 710-330C—, the story voice data 700-330 is read at random in said step 330, and as shown in drawing 6 (A), it is outputted.

[0083] Thus, since one is chosen and it is outputted at random also in the same scene out of the data by which two or more preparation was carried out, it starts by "what kind of expansion this ball race really shows" at a certain time, and starts by "racers enter one after another" at the time of others. Therefore, unlike the conventional monotonous play-by-play broadcasting, a player can enjoy a play any number of times, without getting bored.

[0084] Next, introduction of the player which entered the 1st is performed (step 340,350). Namely, the story voice data 700-2 with which the pattern distinction section 52 was memorized by the main data storage section 57, The command which reads the voice data for player discernment of the first player memorized in the substitution data storage section 58 "a racer shell" is outputted. By this the speech synthesis section 54 These data are read from the storage sections 57 and 58, said voice data for discernment is inserted in the substitution area 800 of the story voice data 700-2, and this is outputted as a sound signal for entry member introduction (step 350).

[0085] If an injection of new coin is detected next (step 340), entry member introduction play-by-play broadcasting (step 350) will be performed similarly.

[0086] Thus, by play-by-play broadcasting for an entry of this example, whenever a player newly enters, introduction of a new entry member will be performed at step 350 using the voice data for player discernment.

[0087] Therefore, since the pleasure of a player heard that the identifier which was excited more and the gallery also knows well is broadcast will increase if its vehicle name is announced, its customer effect is also large. Furthermore, since this play-by-play broadcasting is constituted so that it may be carried out in the voice of the pro who had heard it, rising more is expected.

[0088] It is in this voice data for player discernment with identifier or vehicle name of the racer known well, and if a player may enable it to choose a favorite identifier and does in this way, the ambient atmosphere of a game can also be enlivened further.

[0089] And since registration of an entry will be completed if fixed time amount progress is carried out and the deadline of is passed (step 360) after a timer starts (step 320) (step 370), play-by-play broadcasting for an entry will also be ended.

[0090] After entry play-by-play broadcasting finishes, on-the-spot play-by-play broadcasting before a start (step 400) is performed next. An example of the concrete play-by-play-broadcasting output before a start which used the flow which shows the procedure in which the junction electronic speech circuit 50 performs on-the-spot play-by-play broadcasting before a start to drawing 7 R> 7 with the data memorized by drawing 8 at the voice data storage section 56 is shown.

[0091] Story voice data 700-410,700-420 memorized in the main data storage section 57 in order to perform play-by-play broadcasting before a start in drawing 8 (B) -- The example is shown. This story voice data is two or more partial junction data 700-410,700-420. -- It is outputted in order. In here, the data of 700-410,700-440,700-460 are formed as junction data of a cover half fixed [the contents']. Moreover, the data of 700-420,700-430,700-450 are formed from different contents of junction as selection mold junction data with which one of the arbitration is chosen.

[0092] Moreover, said data 700-410 are constituted so that the data area 800 for substitution voice may be included in the part, and the voice data for substitution showing the identifier of a racing course is inserted in here. This voice data for substitution is memorized in the substitution data storage section 58.

[0093] If play-by-play broadcasting before a start is started as shown in drawing 7 , selection course introduction play-by-play broadcasting (step 410) will be performed first. At this time, the data 700-410 with which the main data storage section 57 is read, and the voice data for substitution "Suzuka" which the player read from the substitution data storage section 58 specified are compounded, and play-by-play broadcasting "today is Suzuka Circuit of familiarity" is performed. Some things by which said course name was known well are prepared, and a player can specify a course in advance of a play.

[0094] Thus, termination of selection course introduction play-by-play broadcasting performs each play-by-play broadcasting of degree step 420,430,440,450.

[0095] At step 420,430,450, it will be read from the selection mold junction data 700-420,700-430,700-450 memorized in the main data storage section 57 at random [arbitration / one], and as shown in drawing 8 (A), a voice output will be carried out. Therefore, even if it repeats a game how many times, play-by-play broadcasting before this start becomes that from which the contents differed each time, and a player does not get bored with it.

[0096] And from a game machine 10, if a start signal is inputted, the junction data 700-460 will be read from the main data storage section 57, and as shown in drawing 8 (A), the voice output of the play-by-play broadcasting for a start will be carried out (step 460). And play-by-play broadcasting before a start is ended.

[0097] Termination of play-by-play broadcasting before a start performs ball-race play-by-play broadcasting (step 500) next.

[0098] The data separation circuit 40 picks out data (drawing 9) required for speech synthesis from the ball-race data of each player sent every 1/60 second, and sends them to the pattern distinction section 52. In the pattern distinction section 52, it asks for ball-race data as shown in drawing 10 from the sent data (drawing 9), and the read-out command of the voice data corresponding to the expansion pattern of a ball race is outputted.

[0099] Play-by-play broadcasting of a ball race looks at ball-race data fundamentally, if it approaches while [fixed] there is distance of players, description of the part will be begun, and if it comes out of [a certain] fixed, the description will be finished there. Moreover, according to ball-race expansion situations, such as spin of other vehicles, and course out, exact priority attachment has been carried out and other descriptions may start in the midst of description. In such a case, it is made to talk in the excited tone, and it is set up so that a place may be heaped up.

[0100] Drawing 11 is a flow which shows the procedure of determining what kind of ball-race on-the-spot play-by-play broadcasting the pattern distinction section 52 performs. According to the situation, as for play-by-play broadcasting, priority is decided beforehand. Therefore, when the situation of a ball race changes during play-by-play broadcasting, the present play-by-play broadcasting may be interrupted depending on the priority of the situation, and it may move to new play-by-play broadcasting. Thrilling and exciting play-by-play broadcasting which corresponded to change of a situation sharply by this is attained.

[0101] Moreover, if an especially changeless ball race continues for a long time, it goes into production mode, and play-by-play broadcasting which enlivens an ambient atmosphere is put in, and a work with which it is not made to get bored has been carried out.

[0102] The pattern distinction section 52 of an example judges in order whether the ball-race data shown in drawing 10 are the ball-race expansion pattern shown in steps 520, 530, 540, 550, and 560 of drawing 11 , and performs the routine corresponding to a judgment result, i.e., a ball-race announcement routine, a corner routine, a gall routine, an accident routine, or a production routine. At this time, after finishing processing of a gall routine, it returns to Maine and becomes ball-race termination. When carrying out with the other routine, after finishing processing of each routine, when not judging ball-race termination at return and step 570 to Maine, with new ball-race data, the above-mentioned processing is repeated and is performed.

[0103] That is, the pattern distinction section 52 calculates the ball-race data shown in drawing 10 of each player racing car based on the data inputted from the data separation circuit 40 (step 510).

[0104] And based on this ball-race data, the data of two sets of the nearest player racing cars of the distance between two cars are computed, and pattern distinction of whether the distance between two cars is approaching less than 20m is performed (step 520). If judged yes here, a game will be broadcast play by play according to the ball-race announcement routine shown in drawing 12 and drawing 13 .

[0105] Moreover, if judged no at step 520, the player racing car which runs the top next will judge whether it puts in which corner (step 530). If judged yes here, the game according to the corner routine shown in drawing 1414 will be broadcast play by play.

[0106] It judges whether when judged no, the player racing car which runs the top next put with step 530 in the last corner before gall (step 540). If judged yes here, game play-by-play broadcasting will be performed according to the gall routine shown in drawing 1515 .

[0107] Moreover, at step 540, if judged no, it will judge whether the player racing car from which the accident is started next is (step 550). If judged yes here, game play-by-play broadcasting will be performed according to the accident routine shown in drawing 16 .

[0108] If the condition that nothing next happens judges whether it continued for a while (step 560) and is judged yes at said step 550 here when judged no, game play-by-play broadcasting will be performed according to the production routine shown in drawing 17 .

[0109] At step 560, if judged no, when a judgment whether degree ball race was completed is made (step 570) and it is judged yes here, game play-by-play-broadcasting actuation is ended, and when judged no, based on return and new ball-race data, said processing of step 510-S570 will be repeated to said step 510, and will be performed to it. In addition, when priority, such as the top's goal-in, has the high game expansion calculated with new ball-race data also in the middle of play-by-play broadcasting currently outputted by said processing, it is constituted so that it may be carried out by the play-by-play-broadcasting processing there interrupting.

[0110] The procedure of processing of a ball-race announcement routine and the example of play-by-play broadcasting are shown in drawing 12 and drawing 13 . By this ball-race announcement routine, the ball-race expansion about two sets of the nearest player racing cars of the distance between two cars judged at said step 520 is further judged concretely by the order of steps 521a, 522a, 523a, 524a, and 525a.

[0111] And these five steps 521a and 522a — It is based on the decision result of 525a, and they are steps 521b and 522b. — It performs any of five play-by-play-broadcasting actuation of 525b they are, and returns to the routine of Maine shown in drawing 11 .

[0112] It sets in the example and they are said steps 521b and 522b. — In the voice data storage section 56, story voice data 700-521,700-522 — shown at drawing 12 and drawing 13 is memorized for play-by-play broadcasting of 525b. And for example, it is constituted including two or more selectable data 710-521A and 710-521B, and the story voice data 700-521 is 710-521A and 710-521B. — Inside, the substitution area 800 square [among drawing] and surrounded is included. This substitution area 800 is voice data substituted by a player, a ball-race situation, production, etc.

[0113] Thus, each voice play-by-play-broadcasting actuation steps 521b and 522b — Out of two or more data selectable in 525b, any one is chosen at random, and it becomes an expression which is different at every game in order to substitute and carry out the voice output of the square and surrounded substitution area to the voice data according to a situation, and is natural, and play-by-play broadcasting with a variation can be performed.

[0114] Especially, in this example, since five game expansion patterns are set up in a ball-race announcement routine and it is carrying out easy [of two or more expression patterns] about each, it becomes possible to broadcast play by play in detail the game situation of two sets of the player racing cars which carry out dead heat with a different expression.

[0115] The procedure of processing of said corner routine and the example of play-by-play broadcasting are shown in drawing 14 .

[0116] At step 530 shown in said drawing 11 , if judged yes, play-by-play-broadcasting actuation of a corner routine shown in drawing 14 will be performed (step 530b). Voice data 710-530A here memorized by the voice data storage section 56, 710-530B — Any one is chosen from inside. And play-by-play broadcasting in the corner of the player racing car which runs the top to the substitution area 800 of the selected story voice data by inserting in and carrying out the voice output of the voice data of the arbitration determined by a player, a ball-race situation, and production is performed. Thus, by the corner routine, since he is trying to substitute the voice data according to a situation for the substitution part 800 which two or more kinds of expression patterns are prepared, and it is square among drawing, and is shown, play-by-play broadcasting by the corner routine becomes a thing different each time, and is natural, and play-by-play broadcasting with a variation can be performed.

[0117] The procedure of processing of said gall routine and the example of play-by-play broadcasting are shown in drawing 15 . If judged yes at said step 540, it will judge whether by this gall routine, the player racing car of the 2nd place is in the distance of less than 40m with the top (step 541a). When judged yes, play-by-play-broadcasting actuation for gall is performed in the order of steps 541b and 543b, and when judged no, play-by-play broadcasting for gall is performed in the order of steps 542b and 543b, and it operates so that play-by-play broadcasting may be ended after that.

[0118] The procedure of processing of said accident routine and the example of play-by-play broadcasting are shown in drawing 16 . When judged yes at said step 550, three kinds of accident circumstantial judgment of steps 551a, 552a, and 553a is performed by this accident routine, and play-by-play-broadcasting actuation according to the corresponding accident situation is performed (steps 551b, 552b, and 553b).

[0119] Moreover, the procedure of processing of said production routine and the example of play-by-play broadcasting are shown in drawing 17 .

[0120] If judged yes at said step 560, play-by-play-broadcasting actuation shown in step 561b of this production routine will be performed. Two or more junction voice data 710-561A which expresses here contents other than diplomacy of a ball race memorized in the voice data storage section 56, 710-561B — One voice data is chosen at random from inside, and a voice output is carried out from it.

[0121] Thus, in the voice play-by-play-broadcasting actuation of each routine shown in drawing 15 - 16, since he is trying to substitute the contents of the substitution area 800 of the voice data which chose at random [arbitration / one] and was moreover chosen from two or more junction data according to a situation, a different expression at every game is natural, and play-by-play broadcasting which was rich in the variation can be performed.

[0122] Moreover, whenever the pattern distinction section 52 of an example distinguishes each game expansion pattern shown in drawing 11 R> 1 - drawing 17 , the junction change section 70 turns and outputs the view change-over command corresponding to the game expansion pattern concerned to the junction image composition circuit 80. When the view location 610 in game space is set up and it is judged yes at step 530 so that two sets of a head may be displayed on a display, when it follows, for example, is judged yes at step 520 of drawing 11 , the view location 610 is set up so that the player racing car of the top who runs a corner may be displayed on a display, and a player racing car may be seen from the corner upper part. Since the play-by-play-broadcasting game screen corresponding to it will be displayed on a display by doing in this way according to audio play-by-play broadcasting, more real moreover, a gallery can see the situation of a game with the same feeling as play-by-play broadcasting of an actual Formula 1 race, can enliven a game ambient atmosphere, and can heighten the customer effect.

[0123] Furthermore, since play-by-play broadcasting corresponding to a game expansion pattern will always be performed in the system of this example as mentioned above, and it will be carried out by using properly the tone doubled with situations, such as a tone of quiet voice, and an excited tone of voice, in the voice of the announcer of a pro with what play-by-play broadcasting moreover heard, the ambient atmosphere of a game can be enlivened.

[0124] Furthermore, when anything does not have the change of state of a game, by performing the production routine shown in drawing 17 , reading out the present ranking, performing a pit report etc., or carrying out for giving description of a guest etc., the same play-by-play broadcasting as an actual ball race can be performed, and the ambient atmosphere of a game can be enlivened further.

[0125] In addition, this invention is not limited to said example and various kinds of deformation implementation by within the limits of the summary of this invention is possible for it.

[0126] For example, although said example explained this invention to the video game system for multi-players taking the case of the case where it is made application, this invention is applicable not only to for example, this but a circuit ball-race mold game. That is, two or more sets of the racing cars 240 which each player operates are run, and a circuit ball race is made to perform on the circuit course 212 formed in the play field 210, as shown in drawing 21 . At this time, the detection equipment which does not illustrate ball-race data as shown in drawing 10 of each racing car 240 detects, and it may be made to carry out the voice output of the play-by-play broadcasting corresponding to a game expansion pattern based on this detection data using a loudspeaker 62 like said example.

[0127] By doing in this way, game production which tells the situation of a game as play-by-play broadcasting can be performed to the visitor who is doing turn waiting, and a surrounding gallery, and the customer effect to a circuit ball-race mold game system can be heightened.

[0128] moreover — although said example explained taking the case of the play-by-play-broadcasting equipment which broadcasts the ball races equipped with CRT, such as a driving game and a circuit ball-race mold game, play by play — this invention — not only this but a sport, a battle, etc. — etc. — it is applicable to the play-by-play-broadcasting equipment of the game of various classes.

[0129]

[Effect of the Invention] As explained above, according to this invention, play-by-play broadcasting corresponding to game expansion is performed automatically, and it is effective in the ability to obtain the game play-by-play-broadcasting equipment with which not only a player but a spectator can enjoy a game.

[0130]

[Translation done.]

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TECHNICAL FIELD

[Industrial Application] This invention relates to the game play-by-play-broadcasting equipment which broadcasts expansion of a game play by play.

[Translation done.]

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EFFECT OF THE INVENTION

[Effect of the Invention] As explained above, according to this invention, play-by-play broadcasting corresponding to game expansion is performed automatically, and it is effective in the ability to obtain the game play-by-play-broadcasting equipment with which not only a player but a spectator can enjoy a game.

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OPERATION

[Means for Solving the Problem and its Function] In order to attain said purpose, invention of claim 1 Are game play-by-play-broadcasting equipment which performs automatically play-by-play broadcasting corresponding to game expansion of a game system, and it corresponds to two or more game expansion patterns beforehand. A voice data storage means by which the predetermined voice data for play-by-play broadcasting was memorized, and a pattern distinction means to distinguish the game expansion pattern of a game system and to output the read-out command of the voice data corresponding to a game expansion pattern, Based on said read-out command, the voice data for play-by-play broadcasting is read from said voice data storage means, and it is characterized by carrying out the voice output of the play-by-play broadcasting corresponding to game expansion including a speech synthesis means to compound a sound signal.
[0010] According to invention of claim 1, the voice data for game play-by-play broadcasting corresponding to two or more game expansion patterns is beforehand memorized for the voice data storage means.
[0011] And when a pattern distinction means distinguishes the game expansion pattern of a game system, a speech synthesis means will read the play-by-play-broadcasting voice data corresponding to a game expansion pattern from a voice data storage means, and it will carry out the voice output of the play-by-play broadcasting corresponding to game expansion.
[0012] Thus, to compensate for expansion of a game situation, play-by-play broadcasting is carried out to real time. For this reason, the ambient atmosphere of the game itself can be enlivened, the agitation and presence which a player tastes can be raised, and further, not only a player but a spectator (gallery) can enjoy a game, and becomes possible [heightening the draw of the game machine itself].
[0013] Especially, in this invention, since the game expansion situation which became only a player from ** until now also gets across to a surrounding gallery, not only a player but a gallery can enjoy the game itself, and it becomes possible [heightening the draw of a game machine also from this field]. Furthermore, according to this invention, since the voice output of the play-by-play broadcasting corresponding to game expansion is carried out automatically, an official in charge under exclusive contract becomes unnecessary, and play-by-play broadcasting of fixed quality of him is moreover always attained.
[0014] Moreover, invention of claim 2 is set to the multi-player game system which performs a multi-player game with two or more game machines. A voice data storage means by which the predetermined voice data for play-by-play broadcasting was beforehand memorized corresponding to two or more game expansion patterns, A pattern distinction means to distinguish the game expansion pattern of said multi-player game, and to output the read-out command of the voice data corresponding to a game expansion pattern, Based on said read-out command, the voice data for play-by-play broadcasting is read from said voice data storage means, and it is characterized by performing automatically play-by-play broadcasting corresponding to game expansion including a speech synthesis means to compound a sound signal.
[0015] Thus, according to invention of claim 2, while two or more players which perform a multi-player game emulate each other mutually in other players and common game space in addition to the operation effectiveness of claim 1, signs that a game is performed are broadcast play by play.
[0016] Therefore, a game becomes what became white-hot more, and each player can enjoy a game, tasting a bigger agitation and presence.

[0017] In addition, a surrounding spectator can enjoy signs that two or more players emulate each other, hearing play-by-play broadcasting.

[0018] Invention of claim 3 moreover, said voice data for play-by-play broadcasting corresponding to any one game expansion pattern at least in either of claims 1 and 2 Two or more selection mold junction data of different contents of junction are included. Said pattern distinction means While outputting the read-out command of the voice data for play-by-play broadcasting corresponding to a game expansion pattern It is formed so that the selection read-out command of said selection mold junction data may be outputted. Said speech synthesis means It is characterized by outputting the sound signal for play-by-play broadcasting of a multi-story which reads the voice data for play-by-play broadcasting from said voice data storage means, and broadcasts play by play by the story from which the same game expansion pattern also differs based on said read-out command.

[0019] Thus, according to invention of claim 3, play-by-play broadcasting of play-by-play-broadcasting **** and a multi-story also of the same game expansion pattern is attained by different story, and even if it carries out by repeating a game what times, a player can enjoy play-by-play broadcasting of contents different each time, and it raises the fun of the game itself also from this field, and it is effective [a player] in the ability to offer the game machine with which it does not get bored for a long period of time. In addition, there are a surrounding spectator and effectiveness that it can be enjoyed even if it does not actually play since play-by-play broadcasting of various expressions can be heard.

[0020] As for said pattern distinction means, in here, it is desirable to form from said selection mold junction data, so that the read-out command which reads the data of the contents of junction of arbitration at random may be outputted.

[0021] If it does in this way, since here where the data of an expression of arbitration are chosen at random will be made from the junction data of two or more expressions corresponding to the same game expansion pattern, it becomes play-by-play broadcasting which was rich in change which announcer actually performs, and it can be enjoyed, without getting bored any number of times.

[0022] Invention of claim 4 is set to either of claims 1-3. Moreover, said voice data for play-by-play broadcasting The story voice data which constitutes the story corresponding to a game expansion pattern, and has a data area for substitution voice in a part, It is constituted so that two or more substitutable substitution voice data which constitutes the voice data of said data area for substitution voice may be included. Said voice data storage means The storage area which memorizes story voice data, and the storage area which memorizes substitution voice data are included. Said pattern distinction means While outputting the read-out command which reads the story voice data corresponding to a game expansion pattern as said voice data for play-by-play broadcasting It is formed so that the read-out command which chooses and reads predetermined data from two or more substitution voice data may be outputted. Said speech synthesis means Based on said read-out command, story voice data and substitution voice data are read from said voice data storage means as voice data for play-by-play broadcasting, substitution voice data is inserted in the data area for substitution voice of story voice data, and it is characterized by compounding a sound signal.

[0023] Play-by-play broadcasting which expressed in detail the game expansion information that it changed intricately can be realized easily, without increasing the amount of data, since it substitutes by the data which prepare a variable part in the story voice data corresponding to a game expansion pattern, and change to it according to a game expansion situation according to claim 4. Therefore, a player and a gallery can know detailed game expansion information, and can enjoy a game more.

[0024] In claim 4 by which invention of claim 5 is subordinate to claim 2 moreover, said two or more substitution voice data Two or more voice data for player discernment set up corresponding to the player and/or the player control unit is included. Said story voice data It is formed so that said voice data for player discernment may be inserted in said all all [a part or] for substitution voice. Said pattern distinction means It is characterized by reading so that the voice output of the voice data for player discernment of a predetermined player may be inserted in and carried out to the story voice data corresponding to the game expansion pattern between each player, and outputting a command.

[0025] According to invention of claim 5 Since said two or more substitution voice data can be used as the voice data set up corresponding to the character name or player control unit set up corresponding to the player name or the player and can be woven into play-by-play broadcasting, a player nearby excitement can be carried out and a game can be enjoyed. Moreover, when the acquaintance of a player reaches a gallery and it carries out, it can be aided and enjoyed, hearing play-by-play broadcasting.

[0026] In either of claims 3-5 by which invention of claim 6 is subordinate to claim 2 and claim 2 A junction image composition means to compound the game screen for play-by-play broadcasting of said multi-player game, and a display means to display said game screen for play-by-play broadcasting are included. Said junction image composition means It is formed so that the game screen for play-by-play broadcasting to compound may be changed according to a game expansion pattern, and it is characterized by displaying the game screen for play-by-play broadcasting set by said display means at play-by-play broadcasting.

[0027] According to invention of claim 6, the junction image composition means of game play-by-play-broadcasting equipment distinguishes a game expansion pattern, changes corresponding to this, and can provide a gallery with the image which was united with voice. Therefore, as for a gallery, not only voice but the image which changes to real time can enjoy the expansion information on a game. Since the situation currently especially broadcast by play-by-play broadcasting is displayed as an image by which it is full of a feeling of tension like play-by-play broadcasting of television broadcasting, a gallery can also be excited and a high customer effect can be obtained.

[Translation done.]

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1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

EXAMPLE

[Example] Next, the suitable example of this invention is explained to a detail based on a drawing.
[0029] One example of the multi-player mold game system by which this invention was applied is shown in drawing 1 . As for the game system of an example, game machine 10-a and 10-b— which plurality became independent of through data transmission Rhine are connected mutually, and vying in ranking in the game space as the racing car which other players control, and the computer car which a computer controls where the player racing car which a player controls is the same, each game machine 10-a and 10-b— are formed so that a game may be performed.
[0030] Here, independent game machine 10-a, 10-b, and — mean being formed so that each game machine 10-a, 10-b, and — can perform a single handicap player game independently, respectively. Of course, a multi-player game can also be performed in the same game space among other players through data transmission Rhine.
[0031] Each game machine 10 is formed like the driver's seat of an actual racing car. And a player sits down on a sheet 16, looking at the false three-dimension image (game screen) projected on the display 14, it operates the handle prepared in the control unit 12, an accelerator, a shift lever, a brake, etc., operates a fictitious racing car, and performs a game.
[0032] At this time, the pattern of this ball race is broadcast play by play to a surrounding gallery by game play-by-play-broadcasting equipment 20. That is, the voice output of the play-by-play broadcasting is carried out by the loudspeaker 62, and the play-by-play-broadcasting screen corresponding to this play-by-play broadcasting is displayed on a display 22. Thereby, not only a player but a gallery can enjoy a game. The circuitry of said game system is shown in drawing 2 . Each game machine 10-a, 10-b—, and game play-by-play-broadcasting equipment 20 are connected in the shape of a loop formation through communication link Rhine 30.
[0033] If data are received, each game machine 10 will update the data of a self-opportunity, and will transmit data to the following game machine. Each game machine 10-a and 10-b— perform various kinds of game operations based on the input signal from a control unit 12, and the predetermined game program beforehand determined as the data of other game machines inputted through communication link Rhine 30. And the game screen where **** composition of the 3D-Graphics was carried out for technique is displayed on a display 14. That is, each game machine 10 performs a game operation so that the racing car which a player controls may move the racing course 420 set up as shown in drawing 1919 in predetermined three-dimension game space. A game operation is performed so that it may naturally move on this racing course 420 also in the player racing car of other game machines transmitted through communication link Rhine 30. And perspective-projection conversion of this three-dimension game space is carried out in the plane of projection of predetermined view system of coordinates, and a game screen is formed, and it is formed so that this may be displayed on a display 14.
[0034] Therefore, each game machine 10-a, 10-b — A player can perform a game, vying other players, ranking, etc. in the racing course 420 top. Each game machine 10-a, 10-b which are transmitted to drawing 9 towards other game machines through communication link Rhine 30 — The format of the game machine data 100 is shown. Each game machine data 100 is constituted including the data of which game machine, the ID data 110 which expresses, the load position data 120 showing in which location the game functional player racing car concerned is, and the condition data 130 showing the condition of a player racing car. It is constituted so that said load position data 120 may express using the width-of-face data with which a player racing car expresses which neighborhood of

the width of road it is as the distance data which met the course from the start in that of which neighborhood **** on the racing course 420. Said condition data 130 are constituted as data showing conditions, such as spin of a player racing car, and crash, course out. And according to renewal of a game screen, fundamentally, those contents will be updated every [1/] 60 seconds, and this game machine data 100 will be transmitted towards other game machines.
[0035] And each game machine 10 calculates the ball-race data shown in drawing 10 for every game machine based on the game machine data 100 of other game machines received through communication link Rhine 30. For example, it can ask for the ranking of other game machines, the distance between two cars, and the number of the circumference from the load position data 120. Furthermore, it can ask for the speed of other player racing cars by comparing the load position data 120 of the game machine data 100 received last time and the game machine data 100 received this time.
[0036] The principle Fig. of the image composition technique of this example is shown in drawing 18 .
[0037] The information about the three-dimension object 510 which appears in the three-dimension game space 500 and this three-dimension game space 500 is memorized beforehand in game machine 10-a of an example, 10-b--, and the junction image composition circuit 80 mentioned later. The image information about said three-dimension object 510 is expressed as a geometric model which consists of two or more polygons 512-1,512-2,512-3 and ...., and is beforehand memorized in memory.

[0038] If a driving game is taken for an example, the three-dimension object 510 is a racing car which appears in the three-dimension game space 500, and various kinds of three-dimension objects which, in addition to this, express the background of the racing course 420, a building 430, tunnel 432, a crest 434, a cliff 436, a wall 438, etc. as shown in drawing 19 are arranged in the three-dimension game space 500.
[0039] Said racing course 420 has two or more corner sections 422, up and down or a bank is prepared by the location, and the grade separation is also prepared.
[0040] Perspective-projection conversion is carried out on the perspective-projection side 520 of view system of coordinates centering on the view 610 of a virtual player, and these three-dimension objects are displayed on a display 14 and 22 as a false three-dimension image 522. For example, if the view location of a virtual player is set as the location of the eyes of the driver of a racing car who moves in the inside of the three-dimension space 500 according to actuation of a player, on a display 14 and 22, the sight seen from the driver of the racing car will be displayed. And if a player 600 makes it a front [control unit / 12] and looks at a display 14 from a view 610, he can sit on the driver's seat of a racing car, and an image which is located in the three-dimension space 500 can be seen.
[0041] When a player 600 operates the handle of a control unit 12 etc. and rotation of the racing car on which he is virtually, advancing side by side, etc. are operated, the location of the view 610 over the three-dimension space 500 will change, and the three-dimension space 500 will rotate and advance side by side. For this reason, game operation part calculates rotation of the three-dimension object 510 which constitutes the three-dimension game space 500 based on this actuation signal and a game program and which is a racing car, or other three-dimension objects, advancing side by side, etc. on real time. And as described above, perspective-projection conversion is carried out on the perspective-projection side 520, and these three-dimensions object is displayed on a display 14 as a false three-dimension image 522 which changes on real time.
[0042] Therefore, a player 600 can carry out the virtual simulation of the condition of having participated the inside of the circuit course 420 set up in the three-dimension game space 500 in the ball race, operating a racing car, by operating a control unit 12 and controlling a racing car.
[0043] When the technique of computer graphics is used, said three-dimension object 510 is creating the geometric model using independent body system of coordinates. That is, each polygon which constitutes the three-dimension object 510 is arranged on these body system of coordinates, and that geometric model is specified.
[0044] Furthermore, the three-dimension game space 500 is constituted using a world coordinate (XW, YW, and ZW), and the three-dimension object 510 expressed using body system of coordinates is arranged in a world coordinate according to the movement model.
[0045] And by making the location of a view 610 into a zero, data are changed into the view system

of coordinates which took the direction of a look in the forward direction of the Z-axis, and perspective-projection conversion of each coordinate is carried out to the screen coordinate system which is plane of projection 520. Thus, the image within the visual field of the three-dimension game space 500 which is visible from a view 610 can be displayed on a display 14 and 22.

[0046] Especially, in this example, it is formed so that the location of a view 610 can be changed into arbitration into the three-dimension game space 500 which consists of world coordinates.

[0047] For example, in drawing 18 , the image of the three-dimension game space 500 seen from player racing-car back as shown in drawing 20 (A) can be displayed by setting up a view location behind a three-dimension object, as shown in 610-A. Moreover, a game screen which looks down at the racing car under transit from the sky as shown in drawing 20 (B) can be displayed by setting up a view location above the three-dimension object 510, as shown in 610-B. In an example, each game machine 10 has set the back of a player racing car as 610-A for the view location. Moreover, based on the command from the junction electronic speech circuit 50, the junction image composition circuit 80 mentioned later is formed so that the view location 610 may be changed at any time.

[0048] And if the multi-player game by two or more players is started, the racing car which each player operates will start the multi-player game system of an example from the starting point 440. And it will run, vying in other player racing cars which entered the multi-player game in the racing course 420 top, ranking, time amount, etc.

[0049] The description of this example broadcasts play by play the situation of the racing game of the multi-player performed by doing in this way to a surrounding gallery on real time using the game play-by-play-broadcasting equipment 20 formed apart from each game machine 10-a and 10-b—, and is to have enlivened the ambient atmosphere of a game.

[0050] As shown in drawing 2 , said game play-by-play-broadcasting equipment 20 is constituted including the data separation circuit 40, the junction electronic speech circuit 50, amplifier 60, a loudspeaker 62, the junction image composition circuit 80, and a display 22.

[0051] Said data separation circuit 40 separates data required for junction image composition from the data transmitted in the communication link Rhine 30 top, and outputs them towards the junction image composition circuit 80 while it separates the data for game expansion distinction and outputs them towards an electronic speech circuit 50 out of the data transmitted in the communication link Rhine 30 top.

[0052] Based on the data inputted from the data separation circuit 40, the junction electronic speech circuit 50 distinguishes game expansion, and it is constituted so that the play-by-play-broadcasting sound signal corresponding to game expansion may be outputted from a loudspeaker 62 through amplifier 60. In addition, the junction electronic speech circuit 50 of an example turns and outputs the junction image composition command corresponding to game expansion to the junction image composition circuit 80.

[0053] Said junction image composition circuit 80 calculates the same three-dimension game space as said each game machine 10-a and 10-b— based on the game machine data 100 and the predetermined game program of each game machine inputted from the data separation circuit 40. And it is based on the command inputted from the junction electronic speech circuit 50, and the view location 610 in game space is set up, and it is formed so that the scene of the game space seen from said view location 610 on the display 22 may be displayed as a game play-by-play-broadcasting image.

[0054] Therefore, as shown in drawing 1 , the gallery which is present in the perimeter of game play-by-play-broadcasting equipment 20 can hear play-by-play broadcasting corresponding to game expansion from a loudspeaker 62, and can see the game screen for play-by-play broadcasting moreover displayed on the display 22 according to play-by-play broadcasting. For this reason, a gallery becomes possible [being able to enjoy the voice and the image for play-by-play broadcasting on real time, heightening the effectiveness of the whole game system customer gathering, and raising the operating ratio of a game machine].

[0055] The concrete configuration of said junction electronic speech circuit 50 is shown in drawing 3 .

[0056] The junction electronic speech circuit 50 of an example is constituted including the pattern distinction section 52, the speech synthesis section 54, the voice data storage section 56, and the junction change-over section 70.

[0057] Beforehand, corresponding to two or more game expansion patterns, the predetermined voice data for play-by-play broadcasting writes in said voice data storage section 56, and it is memorized. Said voice data is the voice of the announcer of pro FESHONARU who performs the television actual condition, such as a Formula 1 race, and it is desirable to constitute as voice data which moreover had the same rhythm and intonation as actual play-by-play broadcasting.

[0058] Moreover, in this example, the voice data for play-by-play broadcasting memorized in said voice data storage section 56 is constituted so that the voice data of the story which constitutes the story corresponding to a game expansion pattern, and has a data area for substitution voice in a part, and two or more substitutable substitution voice data which constitutes the voice data of said data area for substitution voice may be included.

[0059] And in order to memorize such voice data, the voice data storage section 56 of an example is constituted including the main data storage section 57 which memorizes two or more story voice data corresponding to a game expansion pattern, and the substitution data storage section 58 which memorizes said substitution voice data.

[0060] The example of the story voice data 700 memorized in the main data storage section 57 is shown in drawing 6 , drawing 8 , drawing 12 - drawing 17 . It is square among drawing and the area [surrounding] 800 is a data area for substitution voice.

[0061] As shown in drawing 8 , a part of this story voice data 700 is constituted so that two or more selection mold junction data 710A of different contents of junction and 710B-- may be included. And the selection output of the one data is carried out at random from two or more of these junction data 710A and 710B--.

[0062] Therefore, the same game expansion also becomes that from which the contents of the play-by-play broadcasting differed each time, and play-by-play broadcasting by which weariness does not come for a player and a gallery can be performed.

[0063] Said pattern distinction section 52 calculates the ball-race data shown in drawing 10 for every player racing car based on the data inputted from the data separation circuit 40, and it is constituted so that a game expansion pattern may be distinguished. And the pattern distinction section 52 turns and outputs the game expansion pattern corresponding to the distinguished game expansion pattern distinguished while reading and turning and outputting a command to the speech synthesis section 54 to the junction change-over section 70.

[0064] An example of the fundamental game expansion pattern which the pattern distinction section 52 distinguishes is shown to drawing 4 by the flow chart.

[0065] First, a game system is controlled by the entry mode of two or more game machine 10 -- shown in drawing 2 in which the entry of fixed time amount and other game machines 10 will be received if coin is thrown in for any being. The pattern distinction section 52 judges that the game system became this entry mode based on the inputted data. And the read-out command of the voice data for play-by-play broadcasting for entry modes is outputted according to the flow chart shown in drawing 5 R> 5 (step 300).

[0066] Moreover, after entry mode is completed, a game system starts the count-down actuation for a start of a player racing car next. The pattern distinction section 52 distinguishes the mode before this start, and outputs the voice data read-out command for front [start] play-by-play broadcasting according to the flow shown in drawing 7 (step 400).

[0067] Moreover, a game system is controlled by the game mode in which a game is actually performed after the count-down actuation for a start is completed next. The pattern distinction section 52 judges that the game system became this game mode based on the inputted data. And according to the flow chart shown in drawing 11 , a fundamental game expansion pattern is judged and the voice data read-out command of play-by-play broadcasting of each routine shown in drawing 12 - drawing 17 based on the decision result is outputted (step 500).

[0068] Thus, the pattern distinction section 52 distinguishes game expansion of a game system, and outputs the read-out command of the voice data corresponding to game expansion to the speech synthesis section 54. In addition, as mentioned above, in the story voice data 700, the voice data area 800 for substitution is contained in the part. In such a case, the pattern distinction section 52 turns and outputs the substitution voice data read-out command corresponding to this voice area 800 for substitution to the speech synthesis section 54.

[0069] Furthermore, when said story voice data 700 contains two or more selection mold junction data 710A and 710B—, it is constituted so that the selection command to selection mold junction data may be outputted. Especially, in this example, the selection command to such selection mold junction data is performed at random each time, or it is set up so that the same data may be continued and it may not choose twice, and play-by-play broadcasting with a variation is performed.

[0070] And based on the voice read-out command inputted by doing in this way, said speech synthesis section 54 reads the story voice data 700 and substitution voice data from the main data storage section 57 and the substitution data storage section 58 as voice data for play-by-play broadcasting, inserts substitution voice data in the data area 800 for substitution voice data of the story voice data 700, and compounds a sound signal. And it is constituted so that the compound sound signal may be outputted from a loudspeaker 62 through amplifier 60.

[0071] the texture which could perform the expression of many in the number of data restricted by considering as the configuration which inserts substitution voice data in the substitution voice data area 800 of keynote voice data as especially mentioned above, and was doubled with the situation — warm play-by-play broadcasting is attained. Thus, play-by-play broadcasting generated is play-by-play broadcasting based on the data of a real time vehicle, it stagnates as real announcer is carrying out, goes on talking that there is nothing, and enables exciting play-by-play broadcasting to which it doubles with a situation and a tone is changed.

[0072] In addition, such voice data has also memorized the tone of the voice cried with the condition of a game in one voice, a quiet tone, the excited tone, etc. are used properly, it is come, since it is, a game rises and a player also carries out a gallery nearby excitement. When capacity is insufficient, you may make it use together with CD, although it has such voice data by ROM fundamentally [all] and reproduces by PCM. for example, words with the often used language long to PCM, such as using CD regenerative apparatus, when there are long words etc., or putting PCM voice and carrying out time amount earnings at the time of access, and the seldom used language — CD — ** — you may use properly.

[0073] In addition, as for said some of substitution voice data, in this example, it is desirable to set up as voice data for player discernment set up corresponding to a player or each game machine. For example, what is necessary is just to set up an identifier of a player, an identifier of a racing car beforehand set up for every game machine, an identifier of a driver, etc. which were registered before game initiation as this voice data for substitution. By doing in this way, the identifier of the racing car which the identifier of a player or a player controls will be used for play-by-play broadcasting, and a player becomes possible [performing a more nearly exciting game].

[0074] Moreover, said junction change-over section 70 is based on the game expansion pattern which the pattern distinction section 52 distinguishes, sets up the location of the view 610 in game space suitably, and outputs a view change-over command towards the junction image composition circuit 80. For example, in broadcasting play by play two sets of the racing cars which run a head, it outputs a view change-over command so that two sets of the racing cars may project on a game screen, for example, so that a view may be set up over the racing car which runs a head.

[0075] Moreover, in, broadcasting play by play the vehicle from which accident is started for example, it sets the location of a view 610 as the road side of a point which has caused accident so that the game screen of the racing car concerned may be displayed.

[0076] Thus, in this example, the inside of a game can change the view location 610 suitably according to a game expansion pattern, and can perform play-by-play broadcasting using both voice and an image.

[0077] Next, game play-by-play-broadcasting actuation of the system of this example is explained to a detail focusing on actuation of the junction electronic speech circuit 50.

[0078] Three fundamental play-by-play-broadcasting modes of this example are shown to drawing 4 that it mentioned above. First, if a player throws in coin for any of two or more game machines 10 being, a game system will serve as entry receptionist mode. At this time, the junction electronic speech circuit 50 of an example performs play-by-play broadcasting for an entry (step 300).

[0079] And termination of this entry mode sets a game system as the start mode in which count actuation for a start is performed to two or more sets of the player racing cars which entered. At this time, the junction electronic speech circuit 50 of an example performs play-by-play-broadcasting actuation before a start (step 400).

[0080] And if start mode is completed and each player racing car starts, a game system will be set as

game mode. At this time, the junction electronic speech circuit 50 continues ball-race play-by-play-broadcasting actuation, and performs it until a game is completed. (Step 500)
An example of a concrete entry play-by-play-broadcasting output using the data memorized by drawing 6 at the voice data storage section 56 in the flow which shows the procedure in which the junction electronic speech circuit 50 performs entry play-by-play broadcasting to drawing 5 is shown. After the first player feeds coin into a game machine, when other players feed coin into other game machines in fixed time amount, a multi-player game can be enjoyed with two or more players. In this fixed time amount, entry play-by-play broadcasting broadcasts play by play signs that each player enters one after another.

[0081] First, if the first player throws in coin (step 310), it becomes the timer start (step 320) of this game machine 10, and repeating installation 20 will receive this timer signal, and will start entry play-by-play broadcasting (step 330).

[0082] The example of the story voice data memorized by the main data storage section 57 of the voice data storage section 56 as 700-330,700-350 is shown in drawing 6 (B). For example, including data 710-330A of different contents table ****** of junction, 710-330B, and 710-330C--, the story voice data 700-330 is read at random in said step 330, and as shown in drawing 6 (A), it is outputted.

[0083] Thus, since one is chosen and it is outputted at random also in the same scene out of the data by which two or more preparation was carried out, it starts by "what kind of expansion this ball race really shows" at a certain time, and starts by "racers enter one after another" at the time of others. Therefore, unlike the conventional monotonous play-by-play broadcasting, a player can enjoy a play any number of times, without getting bored.

[0084] Next, introduction of the player which entered the 1st is performed (step 340,350). Namely, the story voice data 700-2 with which the pattern distinction section 52 was memorized by the main data storage section 57, The command which reads the voice data for player discernment of the first player memorized in the substitution data storage section 58 "a racer shell" is outputted. By this the speech synthesis section 54 These data are read from the storage sections 57 and 58, said voice data for discernment is inserted in the substitution area 800 of the story voice data 700-2, and this is outputted as a sound signal for entry member introduction (step 350).

[0085] If an injection of new coin is detected next (step 340), entry member introduction play-by-play broadcasting (step 350) will be performed similarly.

[0086] Thus, by play-by-play broadcasting for an entry of this example, whenever a player newly enters, introduction of a new entry member will be performed at step 350 using the voice data for player discernment.

[0087] Therefore, since the pleasure of a player heard that the identifier which was excited more and the gallery also knows well is broadcast will increase if its vehicle name is announced, its customer effect is also large. Furthermore, since this play-by-play broadcasting is constituted so that it may be carried out in the voice of the pro who had heard it, rising more is expected.

[0088] It is in this voice data for player discernment with identifier or vehicle name of the racer known well, and if a player may enable it to choose a favorite identifier and does in this way, the ambient atmosphere of a game can also be enlivened further.

[0089] And since registration of an entry will be completed if fixed time amount progress is carried out and the deadline of is passed (step 360) after a timer starts (step 320) (step 370), play-by-play broadcasting for an entry will also be ended.

[0090] After entry play-by-play broadcasting finishes, on-the-spot play-by-play broadcasting before a start (step 400) is performed next. An example of the concrete play-by-play-broadcasting output before a start which used the flow which shows the procedure in which the junction electronic speech circuit 50 performs on-the-spot play-by-play broadcasting before a start to drawing 7 R> 7 with the data memorized by drawing 8 at the voice data storage section 56 is shown.

[0091] Story voice data 700-410,700-420 memorized in the main data storage section 57 in order to perform play-by-play broadcasting before a start in drawing 8 (B) -- The example is shown. This story voice data is two or more partial junction data 700-410,700-420. -- It is outputted in order. In here, the data of 700-410,700-440,700-460 are formed as junction data of a cover half fixed [the contents']. Moreover, the data of 700-420,700-430,700-450 are formed from different contents of junction as selection mold junction data with which one of the arbitration is chosen.

[0092] Moreover, said data 700-410 are constituted so that the data area 800 for substitution voice may be included in the part, and the voice data for substitution showing the identifier of a racing course is inserted in here. This voice data for substitution is memorized in the substitution data storage section 58.

[0093] If play-by-play broadcasting before a start is started as shown in drawing 7 , selection course introduction play-by-play broadcasting (step 410) will be performed first. At this time, the data 700-410 with which the main data storage section 57 is read, and the voice data for substitution "Suzuka" which the player read from the substitution data storage section 58 specified are compounded, and play-by-play broadcasting "today is Suzuka Circuit of familiarity" is performed. Some things by which said course name was known well are prepared, and a player can specify a course in advance of a play.

[0094] Thus, termination of selection course introduction play-by-play broadcasting performs each play-by-play broadcasting of degree step 420,430,440,450.

[0095] At step 420,430,450, it will be read from the selection mold junction data 700-420,700-430,700-450 memorized in the main data storage section 57 at random [arbitration / one], and as shown in drawing 8 (A), a voice output will be carried out. Therefore, even if it repeats a game how many times, play-by-play broadcasting before this start becomes that from which the contents differed each time, and a player does not get bored with it.

[0096] And from a game machine 10, if a start signal is inputted, the junction data 700-460 will be read from the main data storage section 57, and as shown in drawing 8 (A), the voice output of the play-by-play broadcasting for a start will be carried out (step 460). And play-by-play broadcasting before a start is ended.

[0097] Termination of play-by-play broadcasting before a start performs ball-race play-by-play broadcasting (step 500) next.

[0098] The data separation circuit 40 picks out data (drawing 9) required for speech synthesis from the ball-race data of each player sent every 1/60 second, and sends them to the pattern distinction section 52. In the pattern distinction section 52, it asks for ball-race data as shown in drawing 10 from the sent data (drawing 9), and the read-out command of the voice data corresponding to the expansion pattern of a ball race is outputted.

[0099] Play-by-play broadcasting of a ball race looks at ball-race data fundamentally, if it approaches while [fixed] there is distance of players, description of the part will be begun, and if it comes out of [a certain] fixed, the description will be finished there. Moreover, according to ball-race expansion situations, such as spin of other vehicles, and course out, exact priority attachment has been carried out and other descriptions may start in the midst of description. In such a case, it is made to talk in the excited tone, and it is set up so that a place may be heaped up.

[0100] Drawing 11 is a flow which shows the procedure of determining what kind of ball-race on-the-spot play-by-play broadcasting the pattern distinction section 52 performs. According to the situation, as for play-by-play broadcasting, priority is decided beforehand. Therefore, when the situation of a ball race changes during play-by-play broadcasting, the present play-by-play broadcasting may be interrupted depending on the priority of the situation, and it may move to new play-by-play broadcasting. Thrilling and exciting play-by-play broadcasting which corresponded to change of a situation sharply by this is attained.

[0101] Moreover, if an especially changeless ball race continues for a long time, it goes into production mode, and play-by-play broadcasting which enlivens an ambient atmosphere is put in, and a work with which it is not made to get bored has been carried out.

[0102] The pattern distinction section 52 of an example judges in order whether the ball-race data shown in drawing 10 are the ball-race expansion pattern shown in steps 520, 530, 540, 550, and 560 of drawing 11 , and performs the routine corresponding to a judgment result, i.e., a ball-race announcement routine, a corner routine, a gall routine, an accident routine, or a production routine. At this time, after finishing processing of a gall routine, it returns to Maine and becomes ball-race termination. When carrying out with the other routine, after finishing processing of each routine, when not judging ball-race termination at return and step 570 to Maine, with new ball-race data, the above-mentioned processing is repeated and is performed.

[0103] That is, the pattern distinction section 52 calculates the ball-race data shown in drawing 10 of each player racing car based on the data inputted from the data separation circuit 40 (step 510).

[0104] And based on this ball-race data, the data of two sets of the nearest player racing cars of the distance between two cars are computed, and pattern distinction of whether the distance between two cars is approaching less than 20m is performed (step 520). If judged yes here, a game will be broadcast play by play according to the ball-race announcement routine shown in drawing 12 and drawing 13 .

[0105] Moreover, if judged as Nor at step 520, the player racing car which runs the top next will judge whether it puts in which corner (step 530). If judged yes here, the game according to the corner routine shown in drawing 1414 will be broadcast play by play.

[0106] It judges whether when judged as Nor, the player racing car which runs the top next put with step 530 in the last corner before gall (step 540). If judged yes here, game play-by-play broadcasting will be performed according to the gall routine shown in drawing 1515 .

[0107] Moreover, at step 540, if judged as Nor, it will judge whether the player racing car from which the accident is started next is (step 550). If judged yes here, game play-by-play broadcasting will be performed according to the accident routine shown in drawing 16 .

[0108] If the condition that nothing next happens judges whether it continued for a while (step 560) and is judged yes at said step 550 here when judged as Nor, game play-by-play broadcasting will be performed according to the production routine shown in drawing 17 .

[0109] At step 560, if judged as Nor, when a judgment whether degree ball race was completed is made (step 570) and it is judged yes here, game play-by-play-broadcasting actuation is ended, and when judged as Nor, based on return and new ball-race data, said processing of step 510-S570 will be repeated to said step 510, and will be performed to it. In addition, when priority, such as the top's goal-in, has the high game expansion calculated with new ball-race data also in the middle of play-by-play broadcasting currently outputted by said processing, it is constituted so that it may be carried out by the play-by-play-broadcasting processing there interrupting.

[0110] The procedure of processing of a ball-race announcement routine and the example of play-by-play broadcasting are shown in drawing 12 and drawing 13 . By this ball-race announcement routine, the ball-race expansion about two sets of the nearest player racing cars of the distance between two cars judged at said step 520 is further judged concretely by the order of steps 521a, 522a, 523a, 524a, and 525a.

[0111] And these five steps 521a and 522a — It is based on the decision result of 525a, and they are steps 521b and 522b. — It performs any of five play-by-play-broadcasting actuation of 525b they are, and returns to the routine of Maine shown in drawing 11 .

[0112] It sets in the example and they are said steps 521b and 522b. — In the voice data storage section 56, story voice data 700-521,700-522 — shown at drawing 12 and drawing 13 is memorized for play-by-play broadcasting of 525b. And for example, it is constituted including two or more selectable data 710-521A and 710-521B, and the story voice data 700-521 is 710-521A and 710-521B. — Inside, the substitution area 800 square [among drawing] and surrounded is included. This substitution area 800 is voice data substituted by a player, a ball-race situation, production, etc.

[0113] Thus, each voice play-by-play-broadcasting actuation steps 521b and 522b — Out of two or more data selectable in 525b, any one is chosen at random, and it becomes an expression which is different at every game in order to substitute and carry out the voice output of the square and surrounded substitution area to the voice data according to a situation, and is natural, and play-by-play broadcasting with a variation can be performed.

[0114] Especially, in this example, since five game expansion patterns are set up in a ball-race announcement routine and it is carrying out easy [of two or more expression patterns] about each, it becomes possible to broadcast play by play in detail the game situation of two sets of the player racing cars which carry out dead heat with a different expression.

[0115] The procedure of processing of said corner routine and the example of play-by-play broadcasting are shown in drawing 14 .

[0116] At step 530 shown in said drawing 11 , if judged yes, play-by-play-broadcasting actuation of a corner routine shown in drawing 14 will be performed (step 530b). Voice data 710-530A here memorized by the voice data storage section 56, 710-530B — Any one is chosen from inside. And play-by-play broadcasting in the corner of the player racing car which runs the top to the substitution area 800 of the selected story voice data by inserting in and carrying out the voice output of the voice data of the arbitration determined by a player, a ball-race situation, and production is performed. Thus, by the corner routine, since he is trying to substitute the voice data according to a situation for the substitution part 800 which two or more kinds of expression patterns are prepared, and it is square among drawing, and is shown, play-by-play broadcasting by the corner routine becomes a thing different each time, and is natural, and play-by-play broadcasting with a variation can be performed.

[0117] The procedure of processing of said gall routine and the example of play-by-play broadcasting are shown in drawing 15 . If judged yes at said step 540, it will judge whether by this gall routine, the player racing car of the 2nd place is in the distance of less than 40m with the top (step 541a). When judged yes, play-by-play-broadcasting actuation for gall is performed in the order of steps 541b and 543b, and when judged as Nor, play-by-play broadcasting for gall is performed in the order of steps 542b and 543b, and it operates so that play-by-play broadcasting may be ended after that.

[0118] The procedure of processing of said accident routine and the example of play-by-play broadcasting are shown in drawing 16 . When judged yes at said step 550, three kinds of accident circumstantial judgment of steps 551a, 552a, and 553a is performed by this accident routine, and play-by-play-broadcasting actuation according to the corresponding accident situation is performed (steps 551b, 552b, and 553b).

[0119] Moreover, the procedure of processing of said production routine and the example of play-by-play broadcasting are shown in drawing 17 .

[0120] If judged yes at said step 560, play-by-play-broadcasting actuation shown in step 561b of this production routine will be performed. Two or more junction voice data 710-561A which expresses here contents other than diplomacy of a ball race memorized in the voice data storage section 56, 710-561B — One voice data is chosen at random from inside, and a voice output is carried out from it.

[0121] Thus, in the voice play-by-play-broadcasting actuation of each routine shown in drawing 15 - 16, since he is trying to substitute the contents of the substitution area 800 of the voice data which chose at random [arbitration / one] and was moreover chosen from two or more junction data according to a situation, a different expression at every game is natural, and play-by-play broadcasting which was rich in the variation can be performed.

[0122] Moreover, whenever the pattern distinction section 52 of an example distinguishes each game expansion pattern shown in drawing 11 R> 1 - drawing 17 , the junction change section 70 turns and outputs the view change-over command corresponding to the game expansion pattern concerned to the junction image composition circuit 80. When the view location 610 in game space is set up and it is judged yes at step 530 so that two sets of a head may be displayed on a display, when it follows, for example, is judged yes at step 520 of drawing 11 , the view location 610 is set up so that the player racing car of the top who runs a corner may be displayed on a display, and a player racing car may be seen from the corner upper part. Since the play-by-play-broadcasting game screen corresponding to it will be displayed on a display by doing in this way according to audio play-by-play broadcasting, more real moreover, a gallery can see the situation of a game with the same feeling as play-by-play broadcasting of an actual Formula 1 race, can enliven a game ambient atmosphere, and can heighten the customer effect.

[0123] Furthermore, since play-by-play broadcasting corresponding to a game expansion pattern will always be performed in the system of this example as mentioned above, and it will be carried out by using properly the tone doubled with situations, such as a tone of quiet voice, and an excited tone of voice, in the voice of the announcer of a pro with what play-by-play broadcasting moreover heard, the ambient atmosphere of a game can be enlivened.

[0124] Furthermore, when anything does not have the change of state of a game, by performing the production routine shown in drawing 17 , reading out the present ranking, performing a pit report etc., or carrying out for giving description of a guest etc., the same play-by-play broadcasting as an actual ball race can be performed, and the ambient atmosphere of a game can be enlivened further.

[0125] In addition, this invention is not limited to said example and various kinds of deformation implementation by within the limits of the summary of this invention is possible for it.

[0126] For example, although said example explained this invention to the video game system for multi-players taking the case of the case where it is made application, this invention is applicable not only to for example, this but a circuit ball-race mold game. That is, two or more sets of the racing cars 240 which each player operates are run, and a circuit ball race is made to perform on the circuit course 212 formed in the play field 210, as shown in drawing 21 . At this time, the detection equipment which does not illustrate ball-race data as shown in drawing 10 of each racing car 240 detects, and it may be made to carry out the voice output of the play-by-play broadcasting corresponding to a game expansion pattern based on this detection data using a loudspeaker 62 like said example.

[0127] By doing in this way, game production which tells the situation of a game as play-by-play broadcasting can be performed to the visitor who is doing turn waiting, and a surrounding gallery, and the customer effect to a circuit ball-race mold game system can be heightened.

[0128] moreover — although said example explained taking the case of the play-by-play-broadcasting equipment which broadcasts the ball races equipped with CRT, such as a driving game and a circuit ball-race mold game, play by play — this invention — not only this but a sport, a battle, etc. — etc. — it is applicable to the play-by-play-broadcasting equipment of the game of various classes.

[0129]

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the external view of the driving game system by which this invention was applied.
[Drawing 2] It is the block diagram showing the important section of this example.
[Drawing 3] It is the block diagram showing the detailed configuration of a junction electronic speech circuit.
[Drawing 4] It is the outline flowchart of play-by-play-broadcasting actuation.
[Drawing 5] It is the flow chart of entry play-by-play-broadcasting actuation.
[Drawing 6] It is the example of entry play-by-play broadcasting.
[Drawing 7] It is the flow chart of the on-the-spot play-by-play-broadcasting actuation before a start.
[Drawing 8] It is the example of on-the-spot play-by-play broadcasting before a start.
[Drawing 9] It is the explanatory view of game machine data.
[Drawing 10] It is the explanatory view of ball-race data.
[Drawing 11] It is the outline flowchart of ball-race play-by-play-broadcasting actuation.
[Drawing 12] It is the explanatory view (first half) of a ball-race announcement routine.
[Drawing 13] It is the explanatory view (second half) of a ball-race announcement routine.
[Drawing 14] It is the explanatory view of a corner routine.
[Drawing 15] It is the explanatory view of a gall routine.
[Drawing 16] It is the explanatory view of an accident routine.
[Drawing 17] It is the explanatory view of a production routine.
[Drawing 18] It is the explanatory view of the synthetic principle of the false three-dimension game image of an example.
[Drawing 19] It is the explanatory view of a game course.
[Drawing 20] It is the explanatory view of a play-by-play-broadcasting screen.
[Drawing 21] It is the external view of a circuit ball-race mold game.
[Description of Notations]
10 Game Machine
14 Display
20 Game Play-by-play-Broadcasting Equipment
22 Display
30 Communication Link Rhine
40 Data Separation Circuit
50 Junction Electronic Speech Circuit
52 Pattern Distinction Section
54 Speech Synthesis Section
56 Voice Data Storage Section
57 The Main Data Storage Section
58 Substitution Data Storage Section
60 Amplifier
70 Junction Change Section
80 Junction Image Composition Circuit

[Translation done.]

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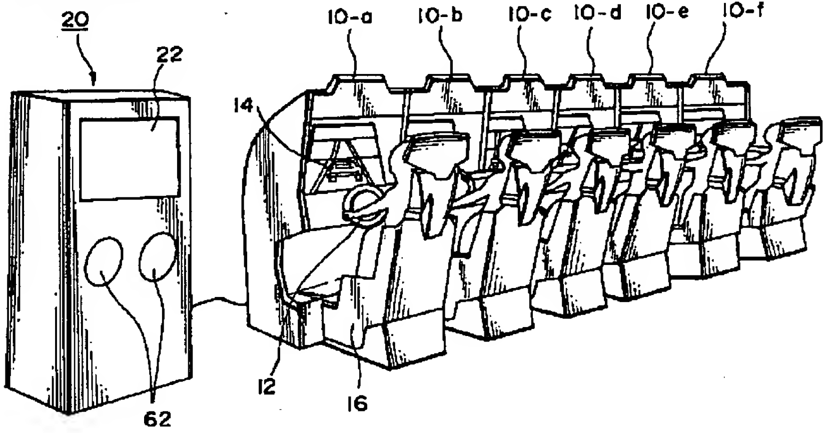
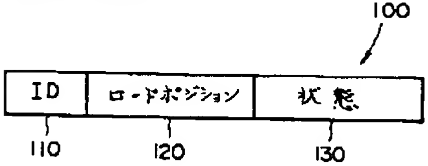
DRAWINGS

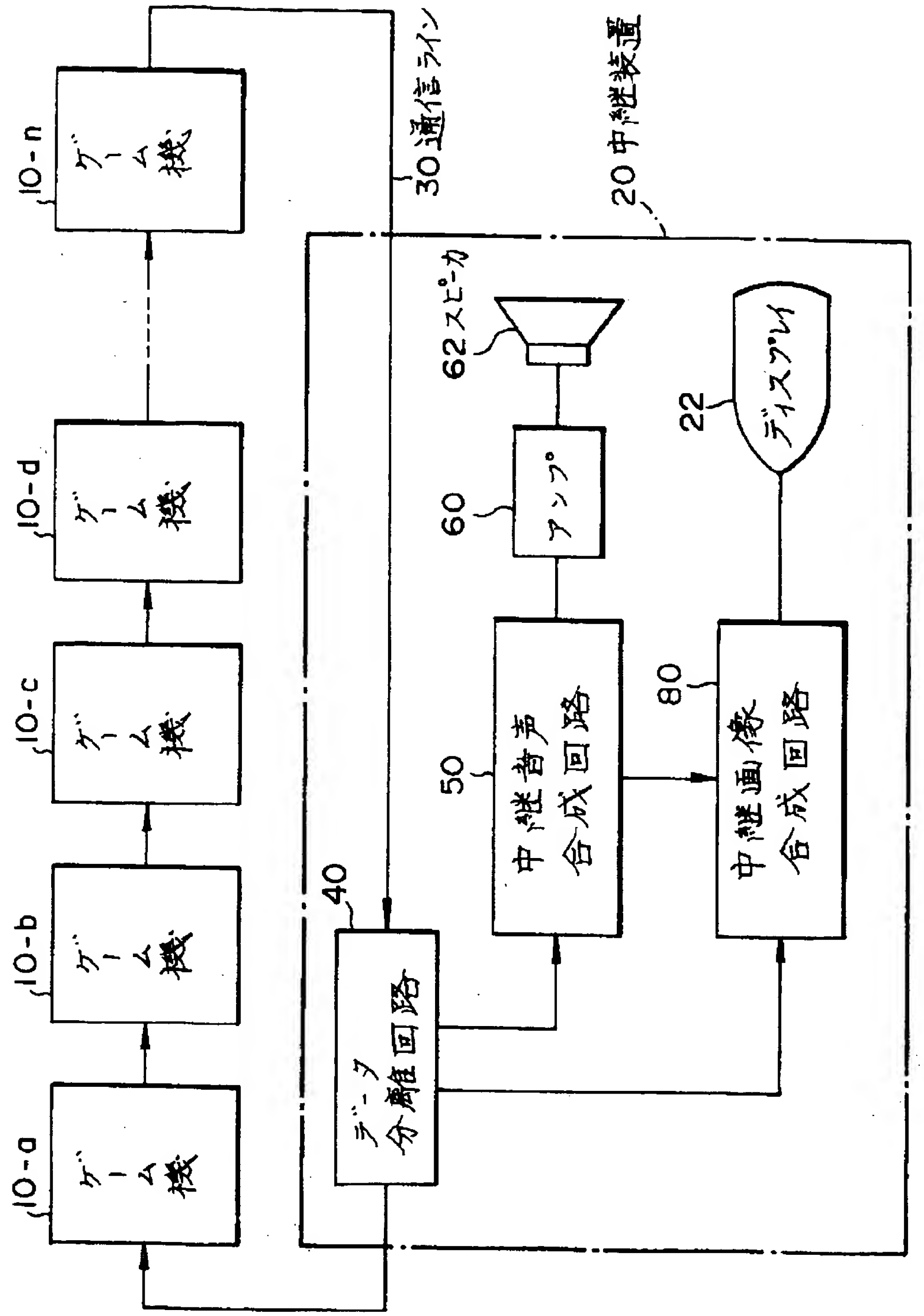
[Drawing 1]


20
22
10-a
10-b
10-c
10-d
10-e
10-f
14
12
16
62

[Drawing 9]

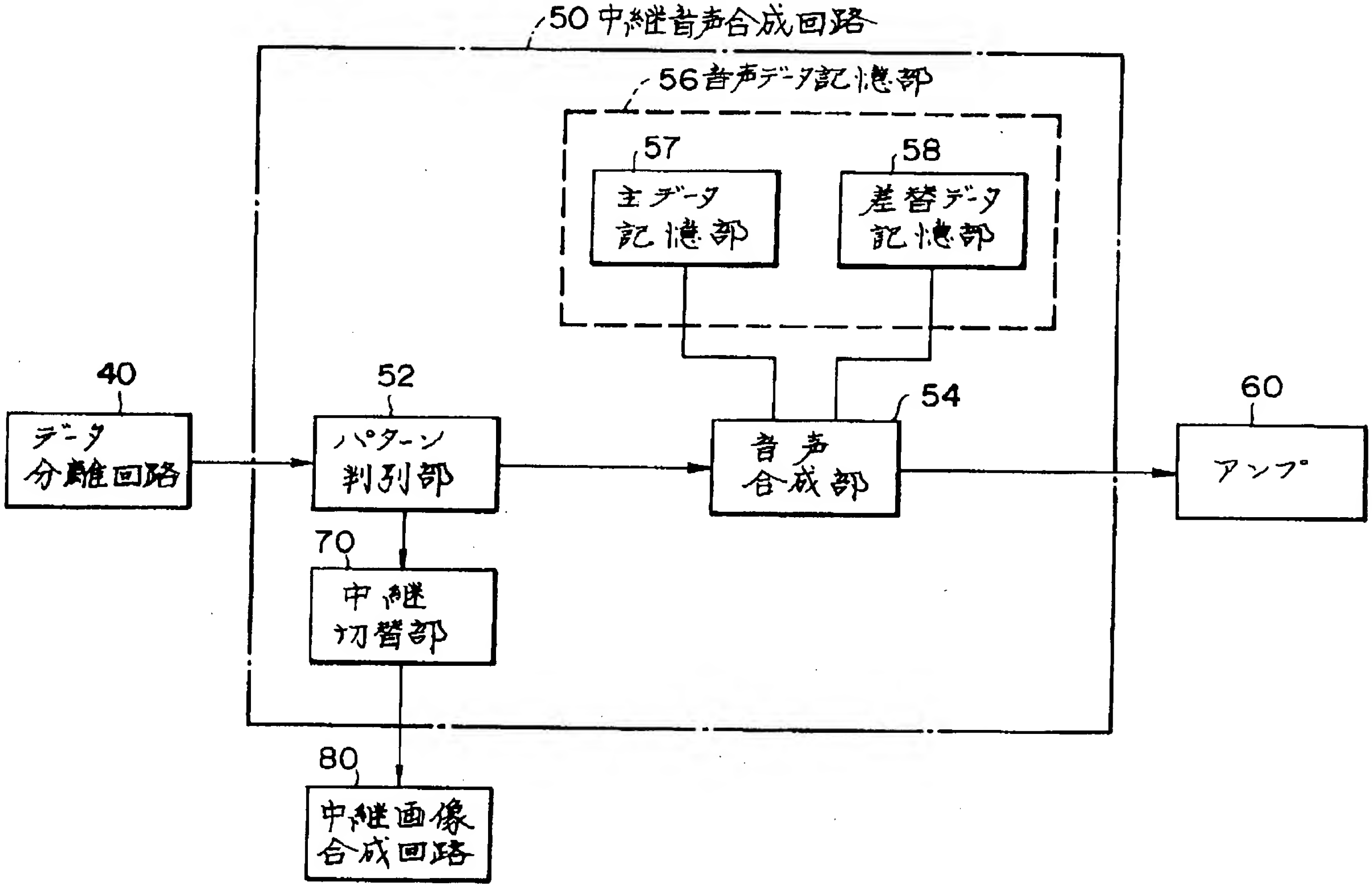

100
ID
ロードポジション
状態
110
120
130

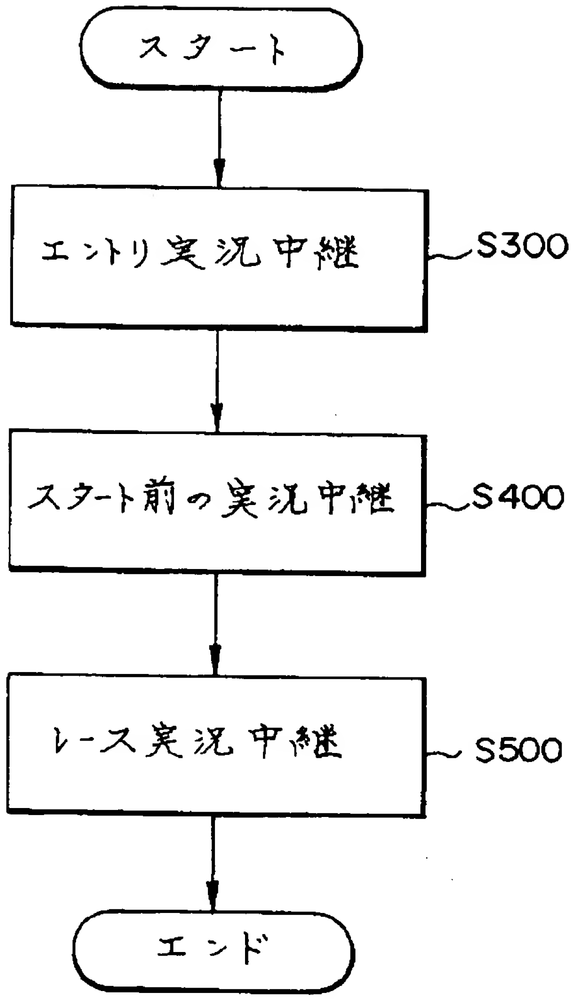
[Drawing 2]


10-a
ゲーム機
10-b
ゲーム機
10-c
ゲーム機
10-d
ゲーム機
10-n
ゲーム機
30 通信ライン
20 中継装置
40
データ
分離回路
50
中継音声
合成回路
80
中継画像
合成回路
60
アンプ
62 スピーカ
22
ディスプレイ

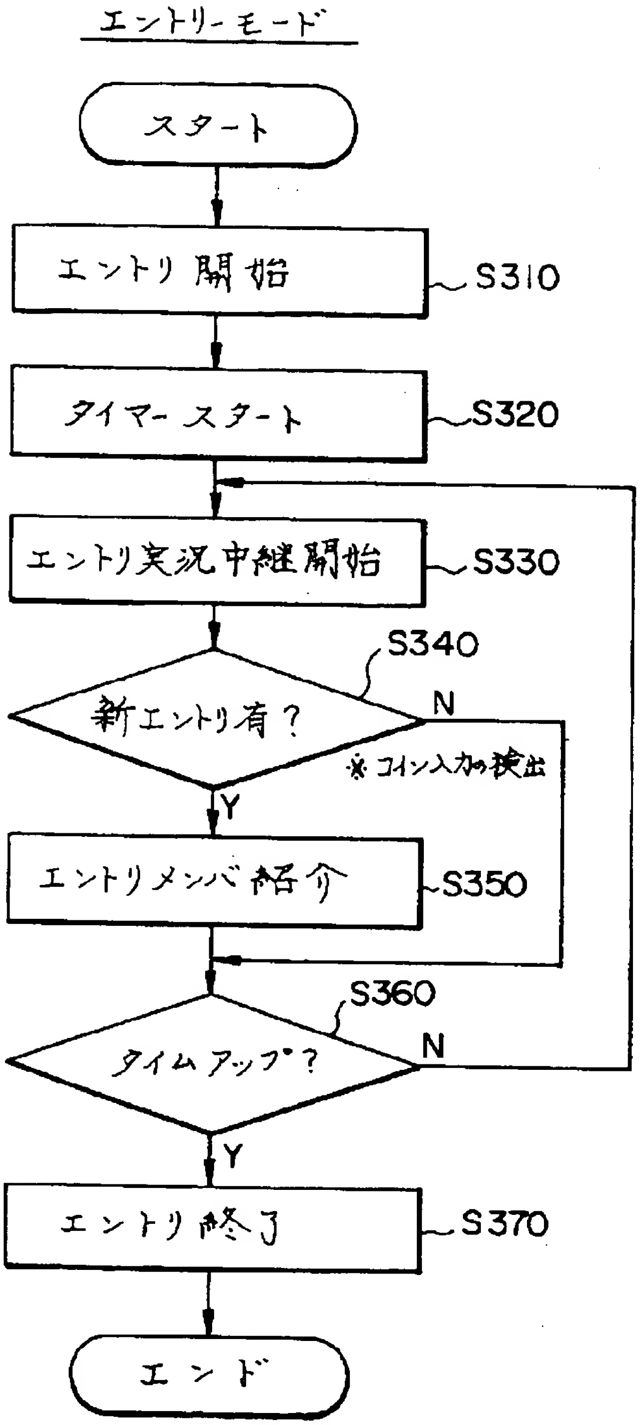
[Drawing 3]

[Drawing 4]


50 中継音声合成回路
56 音声データ記憶部
57
主データ記憶部
58
差替データ記憶部
40
データ分離回路
52
パターン判別部
54
音声合成部
60
アンプ
70
中継切替部
80
中継画像合成回路

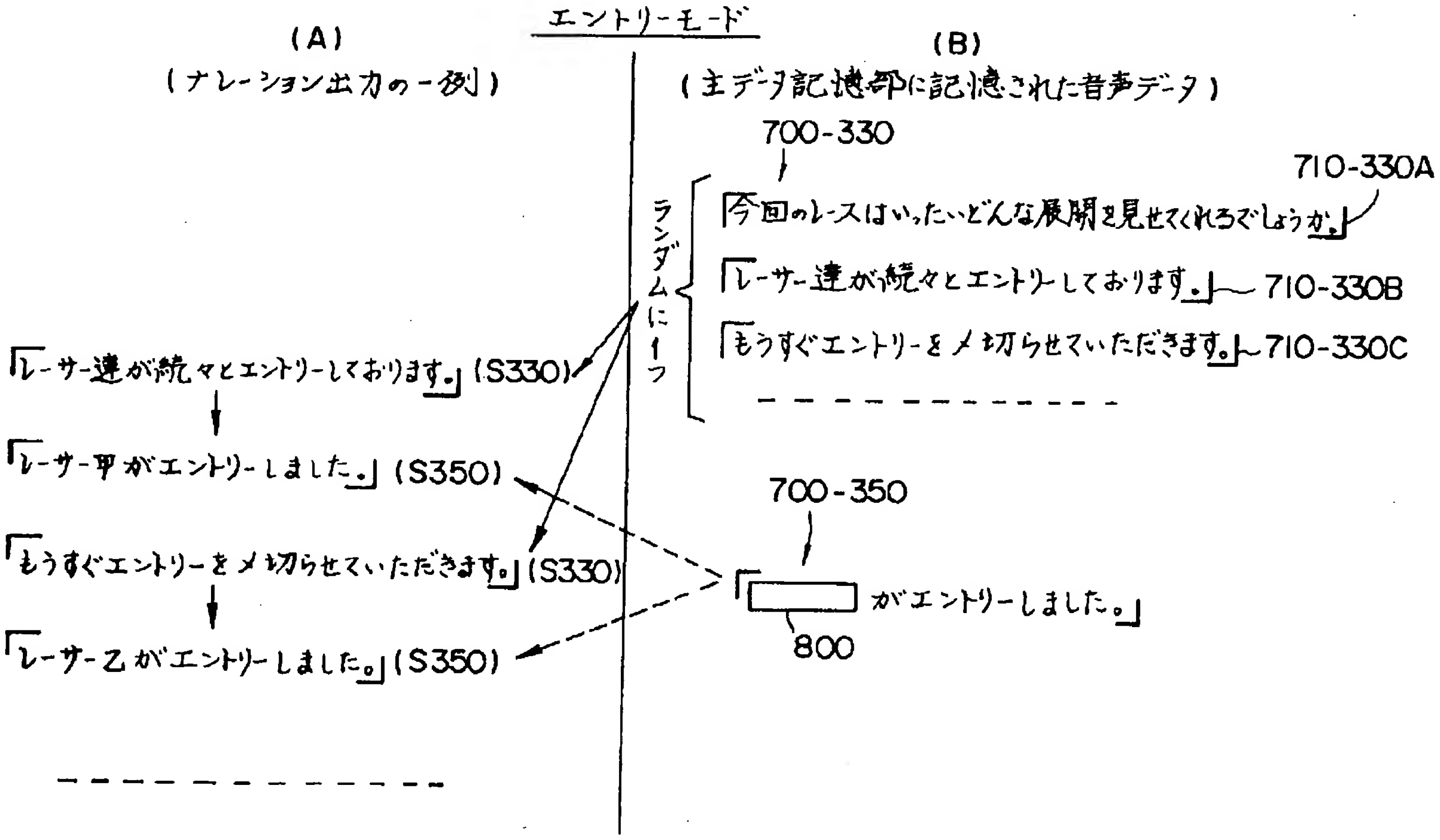

スタート
エントリ実況中継
S300
スタート前の実況中継
S400
レース実況中継
S500
エンド

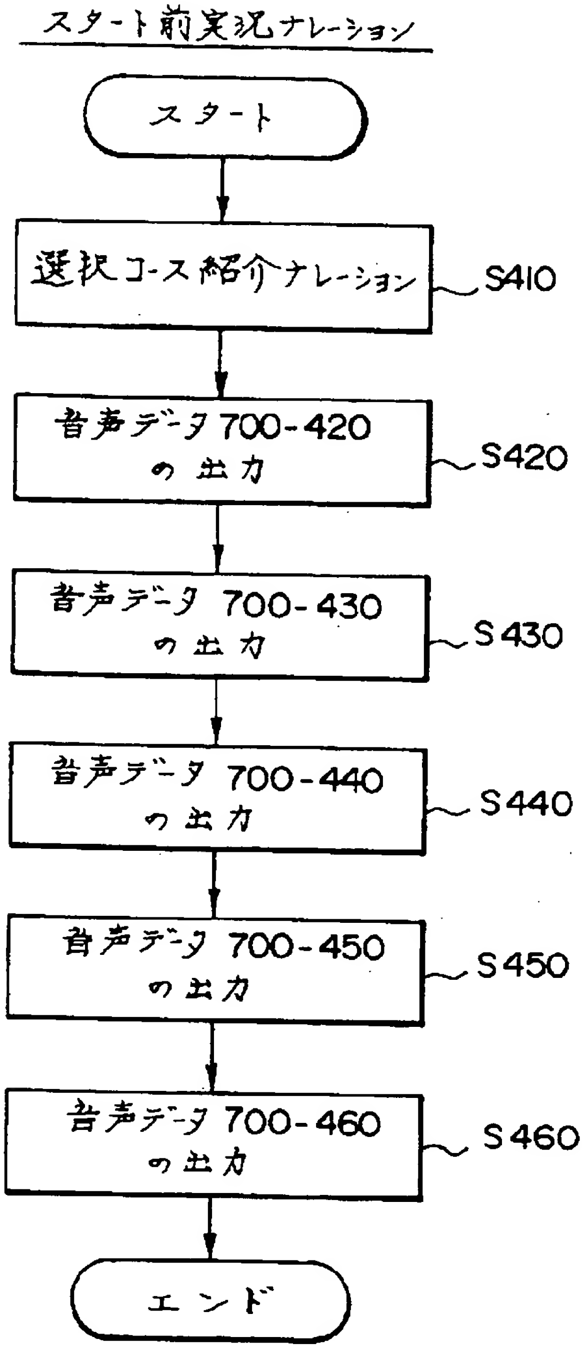
[Drawing 5]


エントリーモード
スタート
エントリ開始
S310
タイマースタート
S320
エントリ実況中継開始
S330
S340
新エントリ有？
N
※コイン入力の検出
Y
エントリメンバ紹介
S350
S360
タイムアップ？
N
Y
エントリ終了
S370
エンド

[Drawing 6]

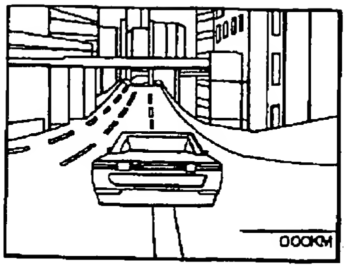
[Drawing 7]


エントリーモード
(A)
(ナレーション出力の一例)
(B)
(主データ記憶部に記憶された音声データ)
700-330
710-330A
「今回のレースはいったいどんな展開を見せてくれるでしょうか。」
「レーサー達が続々とエントリーしております。」
710-330B
「もうすぐエントリーを〆切らせていただきます。」
710-330C
ランダムに1つ
700-350
「 がエントリーしました。」
800
「レーサー達が続々とエントリーしております。」(S330)
「レーサー甲がエントリーしました。」(S350)
「もうすぐエントリーを〆切らせていただきます。」(S330)
「レーサー乙がエントリーしました。」(S350)

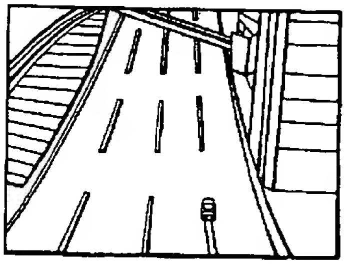

スタート前実況ナレーション
スタート
選択コース紹介ナレーション
S410
音声データ700-420の出力
S420
音声データ700-430の出力
S430
音声データ700-440の出力
S440
音声データ700-450の出力
S450
音声データ700-460の出力
S460
エンド

[Drawing 20]

(A)

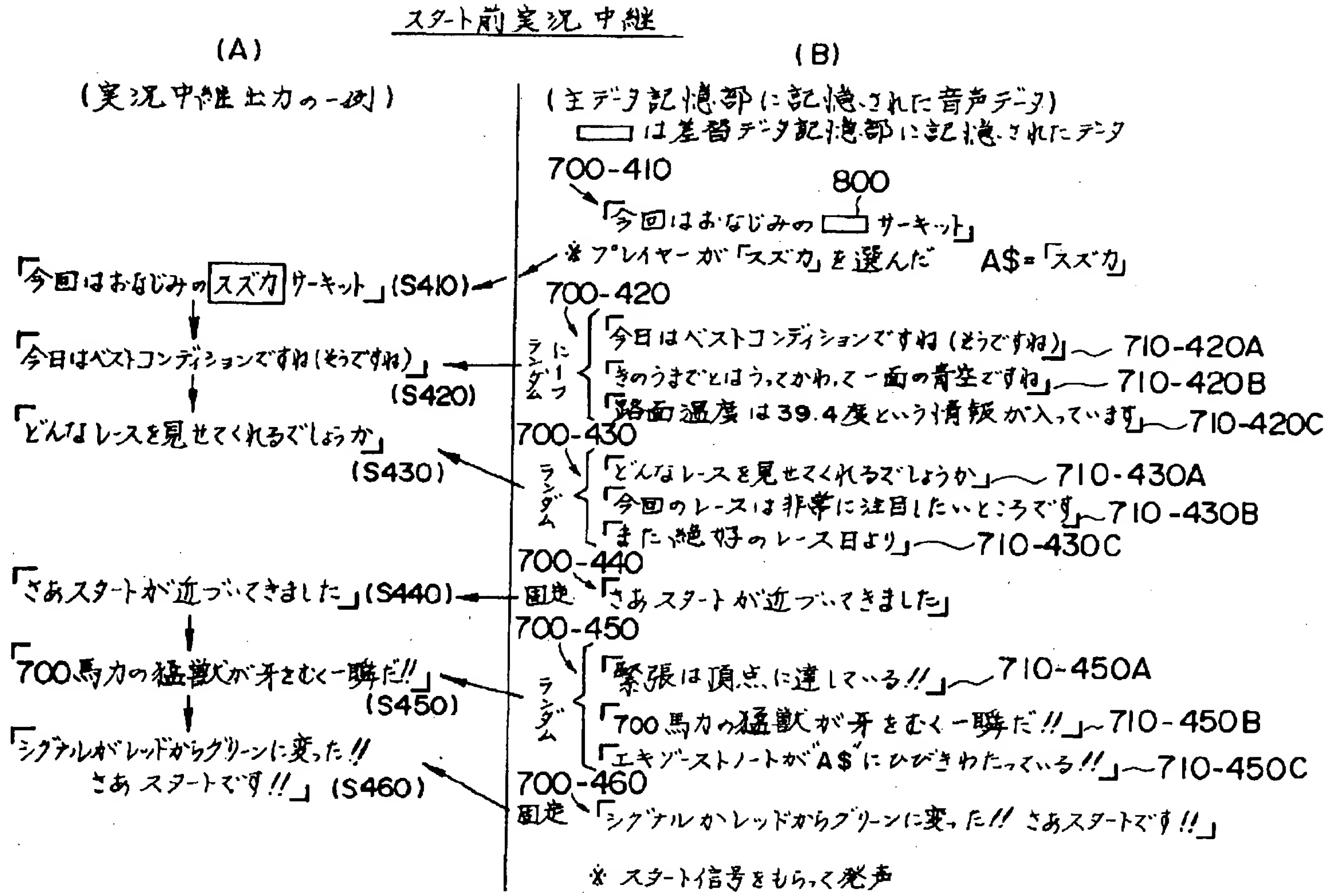


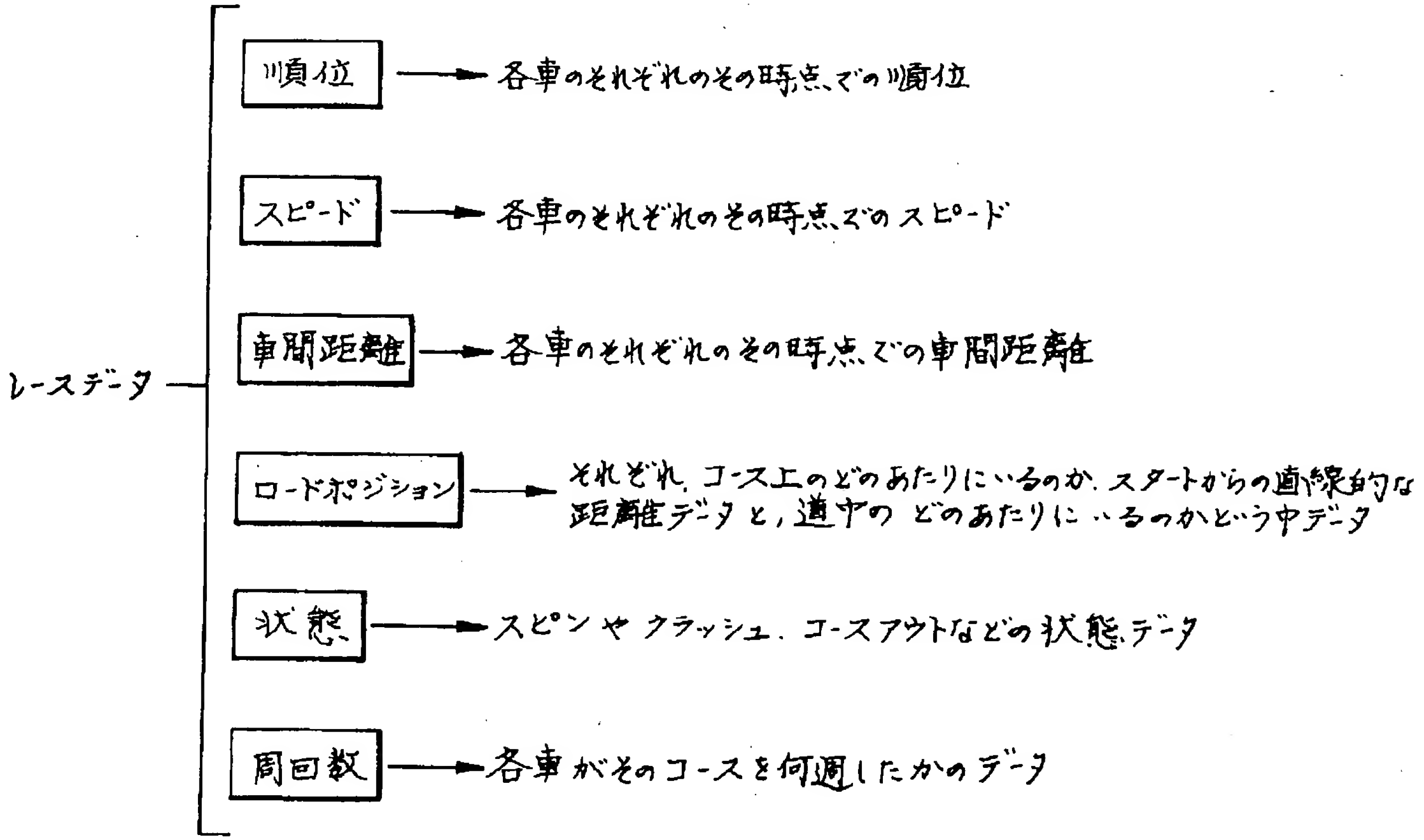
(B)



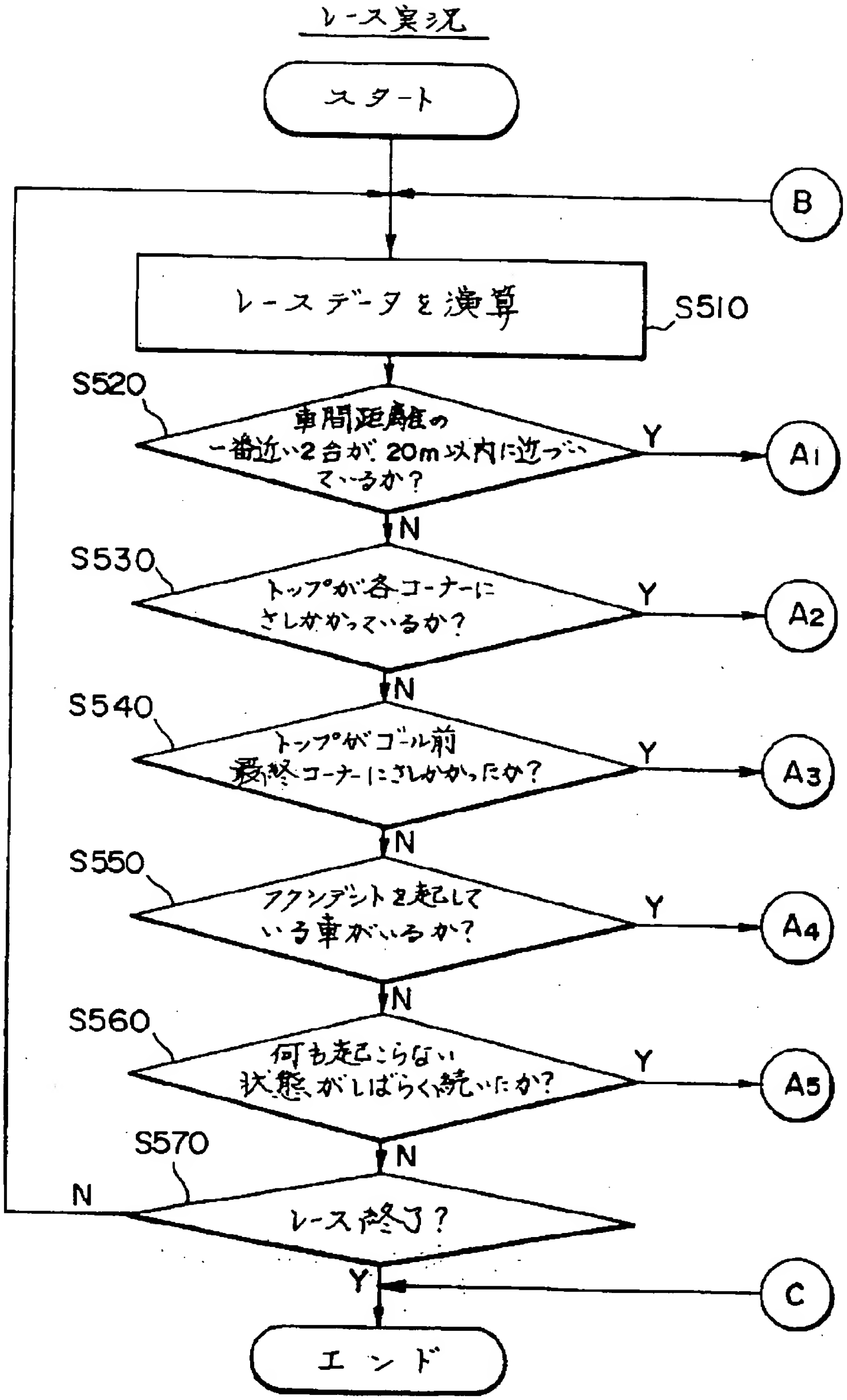
[Drawing 8]

[Drawing 10]


スタート前実況中継
(A)
(実況中継出力の一例)
「今回はおなじみのスズカサーキット」(S410)
「今日はベストコンディションですね(そうですね)」(S420)
「どんなレースを見せてくれるでしょうか」(S430)
「さあスタートが近づいてきました」(S440)
「700馬力の猛獣が牙をむく一瞬だ!!」(S450)
「シグナルがレッドからグリーンに変った!! さあスタートです!!」(S460)
(B)
(主データ記憶部に記憶された音声データ)
□は差替データ記憶部に記憶されたデータ
700-410
800
「今回はおなじみの□サーキット」
※プレイヤーが「スズカ」を選んだ A$=「スズカ」
700-420
ランダムにープ
「今日はベストコンディションですね(そうですね)」710-420A
「きのうまでとはうってかわって一面の青空ですね」710-420B
「路面温度は39.4度という情報が入っています」710-420C
700-430
ランダム
「どんなレースを見せてくれるでしょうか」710-430A
「今回のレースは非常に注目したいところです」710-430B
「また絶好のレース日より」710-430C
700-440
固定
「さあスタートが近づいてきました」
700-450
ランダム
「緊張は頂点に達している!!」710-450A
「700馬力の猛獣が牙をむく一瞬だ!!」710-450B
「エキゾーストノートがA$にひびきわたっている!!」710-450C
700-460
固定
「シグナルがレッドからグリーンに変った!! さあスタートです!!」
※スタート信号をもらって発声

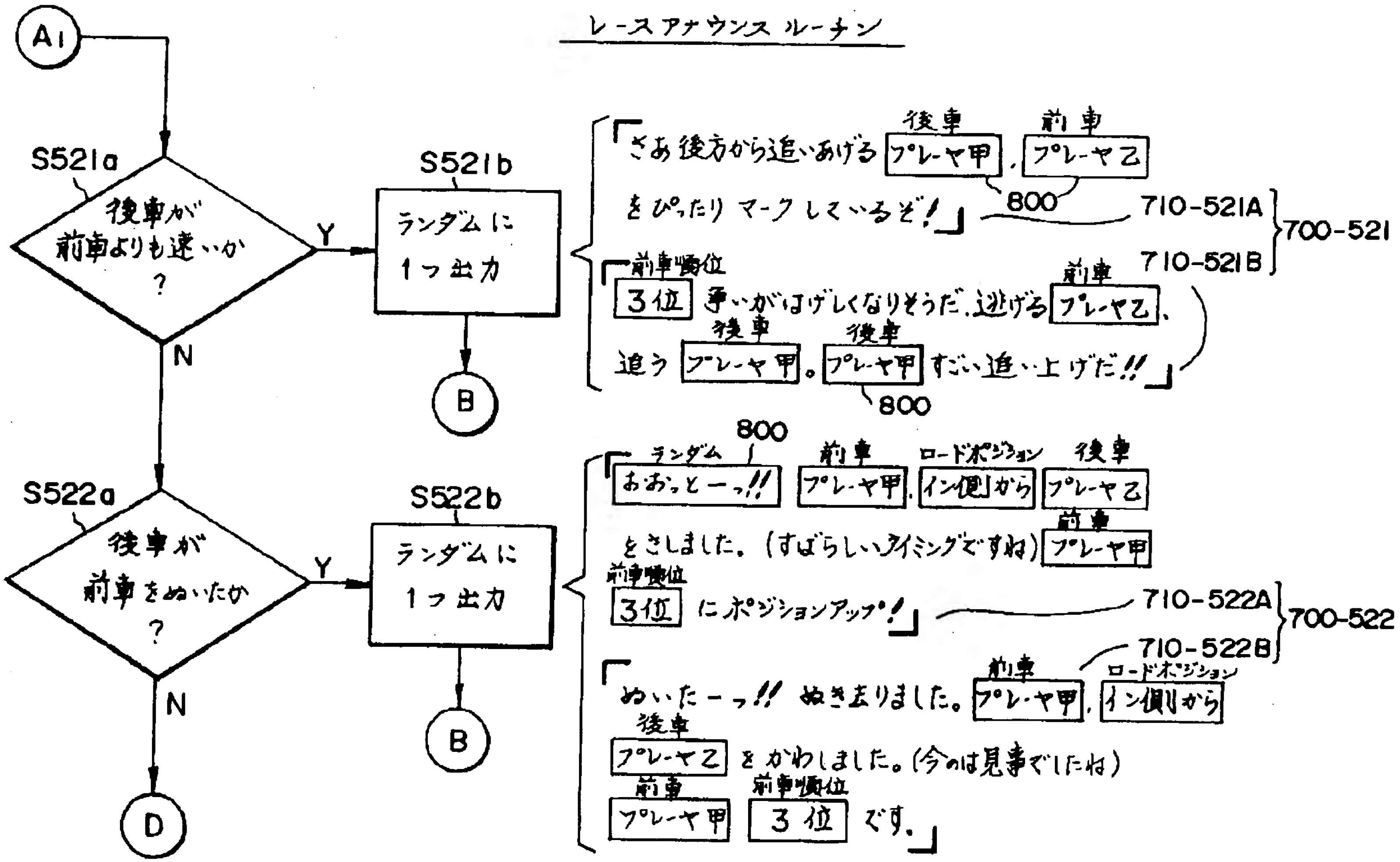

レースデータ
順位
各車のそれぞれのその時点での順位
スピード
各車のそれぞれのその時点でのスピード
車間距離
各車のそれぞれのその時点での車間距離
ロードポジション
それぞれ、コース上のどのあたりにいるのか、スタートからの直線的な距離データと、道中の どのあたりにいるのかという中データ
状態
スピンや クラッシュ、コースアウトなどの状態データ
周回数
各車がそのコースを何週したかのデータ

[Drawing 11]

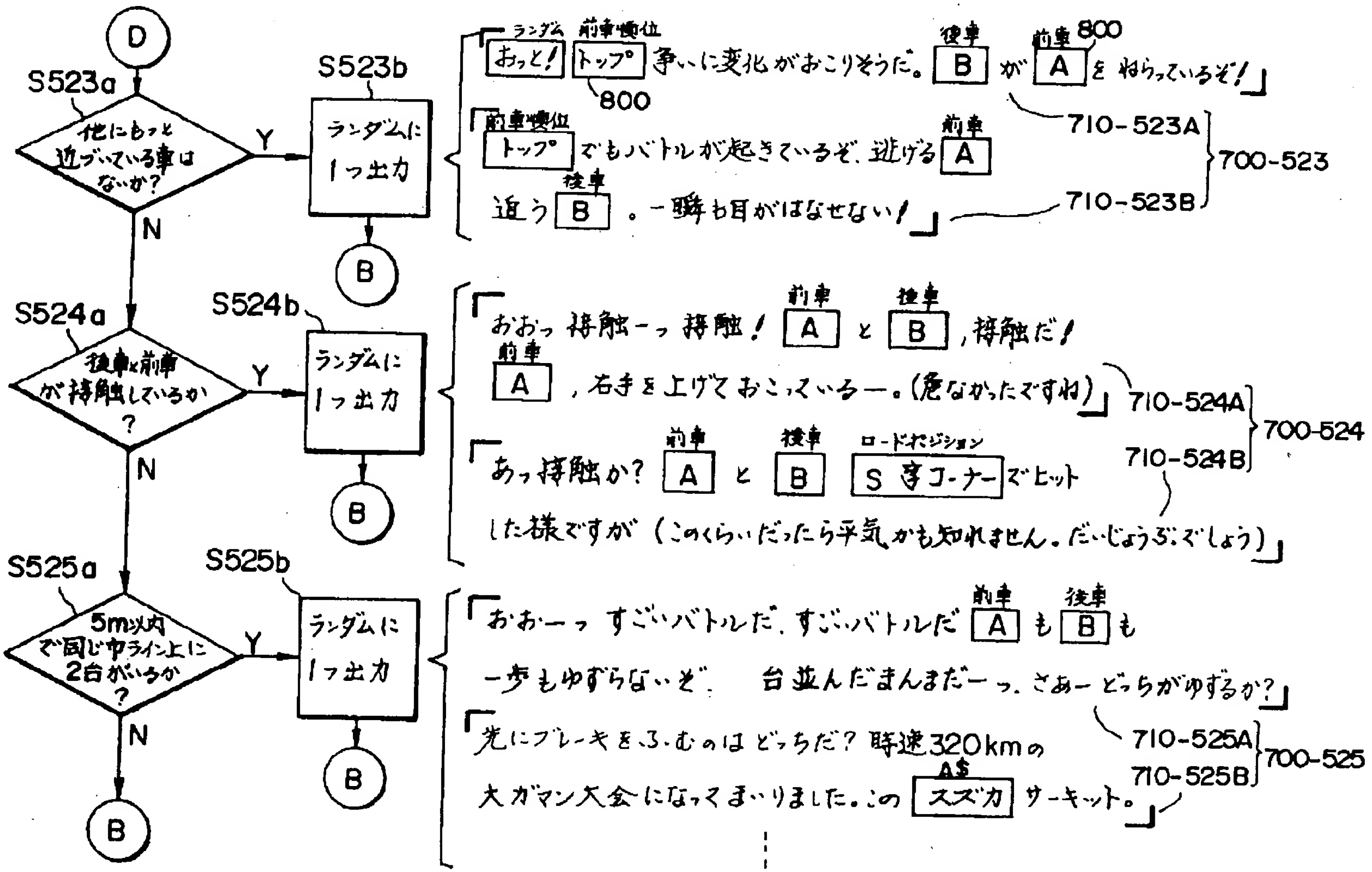

レース実況
スタート
B
レースデータを演算
S510
S520
車間距離の一番近い2台が20m以内に近づいているか？
Y
A1
N
S530
トップが各コーナーにさしかかっているか？
Y
A2
N
S540
トップがゴール前最終コーナーにさしかかったか？
Y
A3
N
S550
アクシデントを起している車がいるか？
Y
A4
N
S560
何も起こらない状態がしばらく続いたか？
Y
A5
N
S570
N
レース終了？
Y
C
エンド

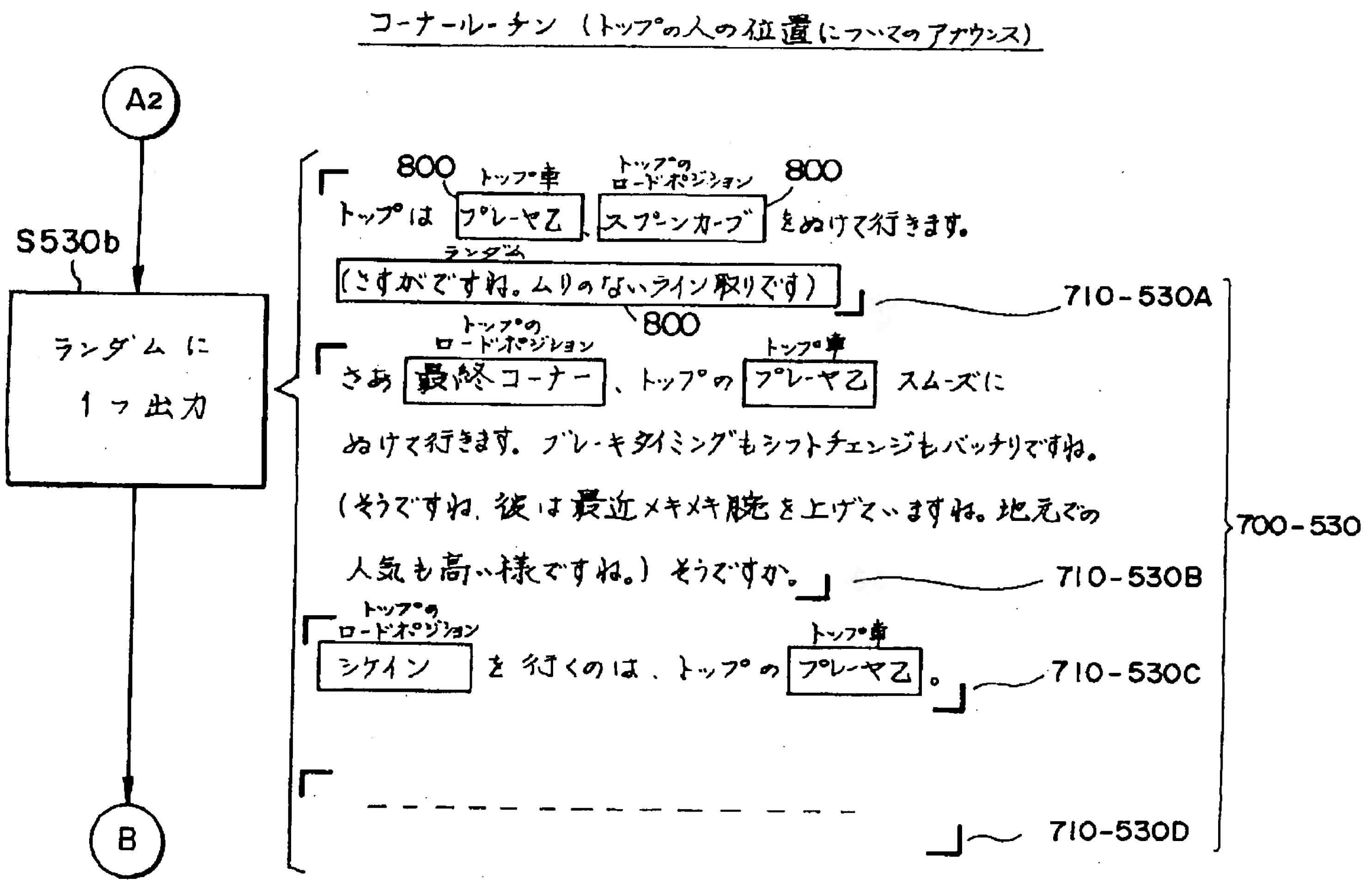
[Drawing 12]

[Drawing 13]


レースアナウンス ルーチン
A1
S521a
後車が前車よりも速いか？
Y
N
S521b
ランダムに1つ出力
B
「さあ後方から追いあげる 後車 プレーヤ甲，前車 プレーヤ乙 をぴったりマークしているぞ！」
「前車順位 3位 争いがはげしくなりそうだ。逃げる 前車 プレーヤ乙、追う 後車 プレーヤ甲。後車 プレーヤ甲 すごい追い上げだ!!」
800
710-521A
710-521B
700-521
S522a
後車が前車をぬいたか？
Y
N
S522b
ランダムに1つ出力
B
D
「ランダム おおっとーっ!! 前車 プレーヤ甲，ロードポジション イン側から 後車 プレーヤ乙 をさしました。(すばらしいタイミングですね) 前車 プレーヤ甲 前車順位 3位 にポジションアップ！」
「ぬいたーっ!! ぬき去りました。前車 プレーヤ甲，ロードポジション イン側から 後車 プレーヤ乙 をかわしました。(今のは見事でしたね) 前車 プレーヤ甲 前車順位 3位 です。」
800
710-522A
710-522B
700-522

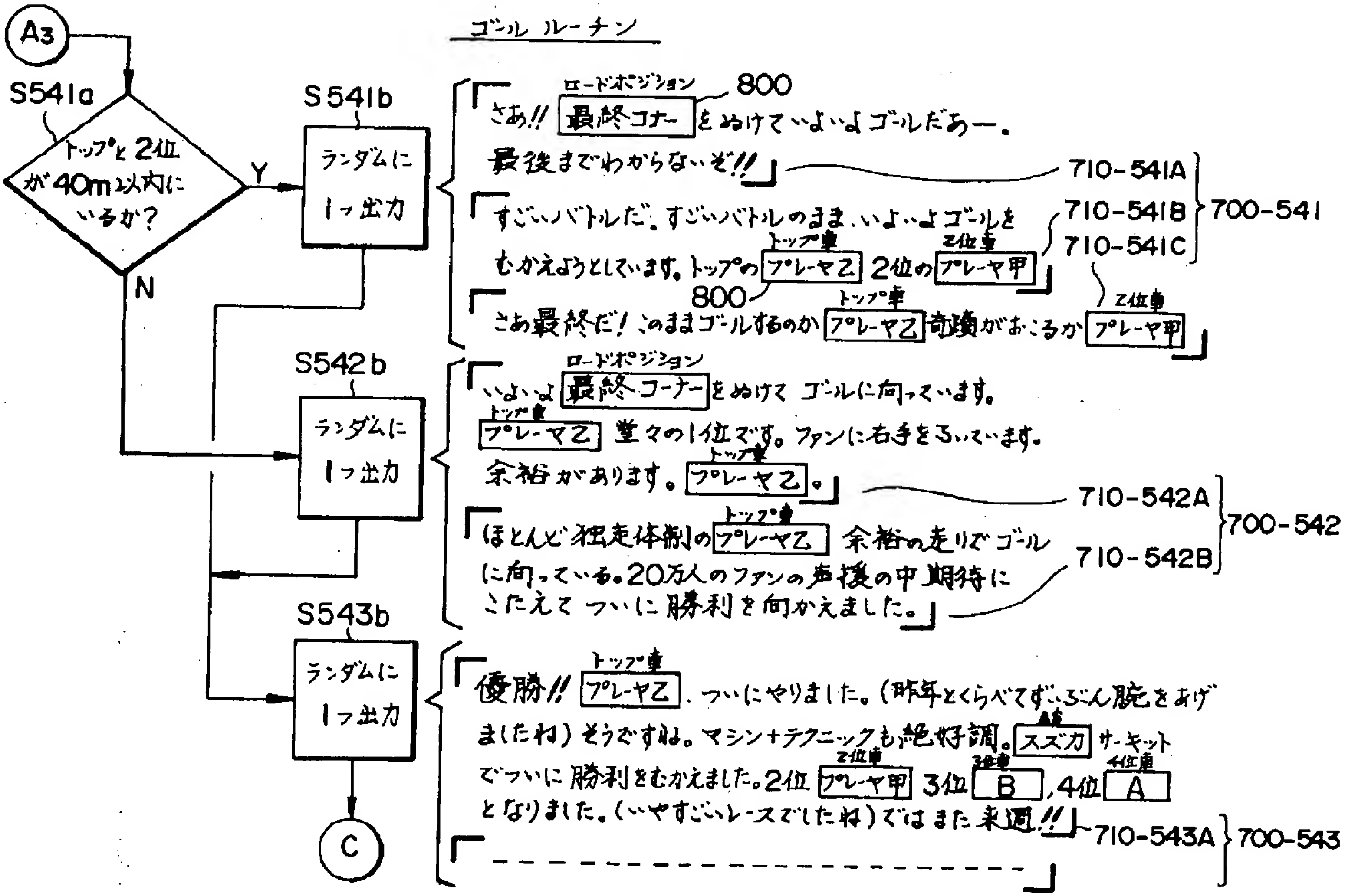
[Drawing 14]


D
S523a
他にもっと近づいている車はないか？
Y
N
S523b
ランダムに1つ出力
B
「ランダム おっと！ 前車順位 トップ 争いに変化がおこりそうだ。後車 B が 前車 A をねらっているぞ！」
800
800
「前車順位 トップ でもバトルが起きているぞ、逃げる 前車 A 追う 後車 B 。一瞬も目がはなせない！」
710-523A
710-523B
700-523
S524a
後車と前車が接触しているか？
Y
N
S524b
ランダムに1つ出力
B
「おおっ 接触ーっ 接触！ 前車 A と 後車 B，接触だ！ 前車 A，右手を上げておこっているー。（危なかったですね）」
「あっ接触か？ 前車 A と 後車 B ロードポジション S字コーナー でヒットした様ですが（このくらいだったら平気かも知れません。だいじょうぶでしょう）」
710-524A
710-524B
700-524
S525a
5m以内で同じ車ライン上に2台がいるか？
Y
N
S525b
ランダムに1つ出力
B
B
「おおーっ すごいバトルだ、すごいバトルだ 前車 A も 後車 B も一歩もゆずらないぞ。台並んだまんまだーっ。さあーどっちがゆずるか？」
「先にブレーキをふむのはどっちだ？時速320kmの大ガマン大会になってまいりました。この AS スズカ サーキット。」
710-525A
710-525B
700-525

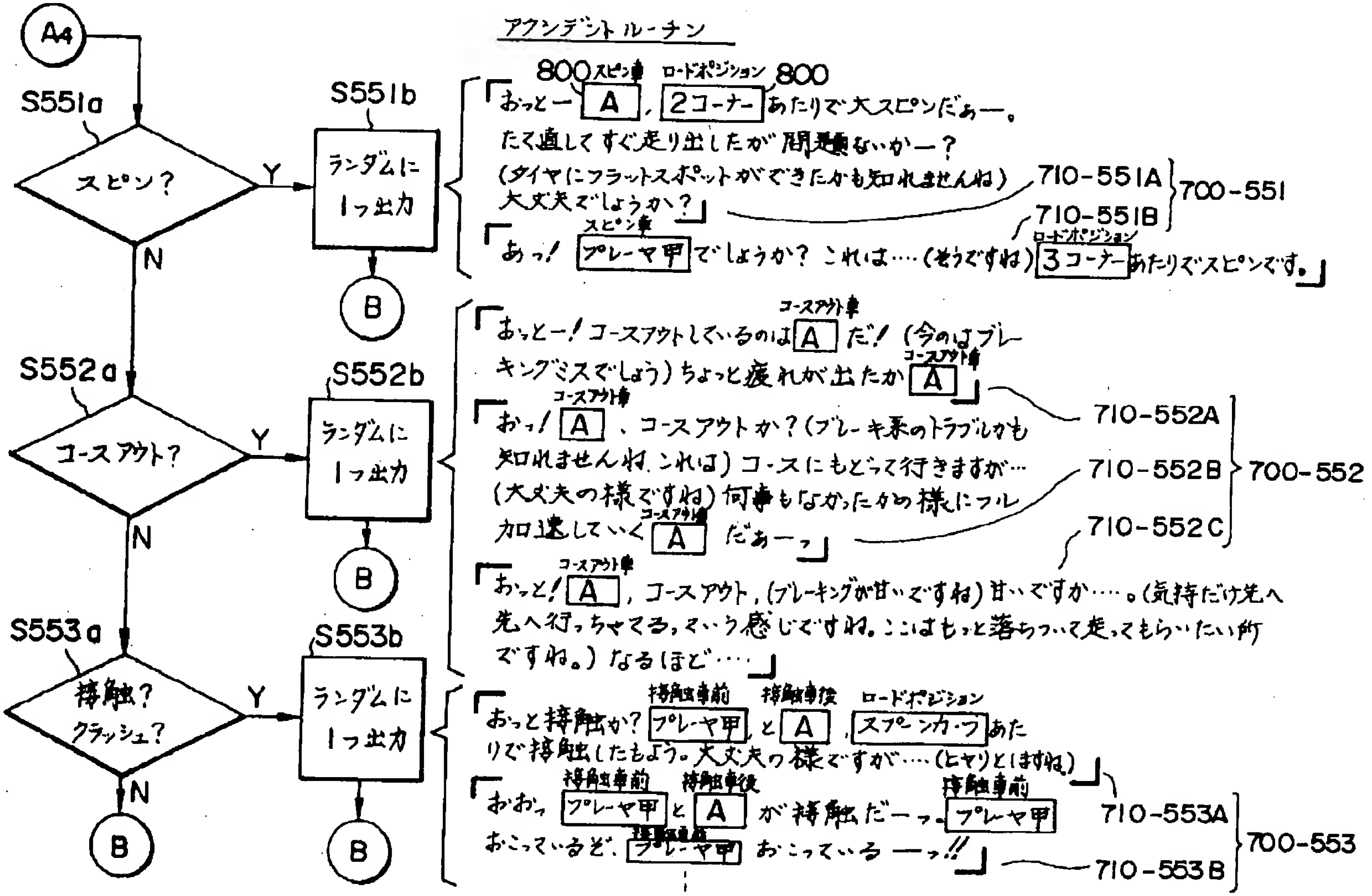

コーナールーチン（トップの人の位置についてのアナウンス）
A2
S530b
ランダムに
1つ出力
B
800
トップ車
トップのロードポジション
800
「トップは プレーヤZ スプーンカーブ をぬけて行きます。
ランダム
（さすがですね。ムリのないライン取りです）」
800
710-530A
トップのロードポジション
トップ車
「さあ 最終コーナー 、トップの プレーヤZ スムーズに
ぬけて行きます。ブレーキタイミングもシフトチェンジもバッチリですね。
（そうですね、彼は最近メキメキ腕を上げていますね。地元での
人気も高い様ですね。）そうですか。」
710-530B
トップのロードポジション
トップ車
「シケイン を行くのは、トップの プレーヤZ 。」
710-530C
「－－－－－－－－－－－－－－」
710-530D
700-530

[Drawing 15]

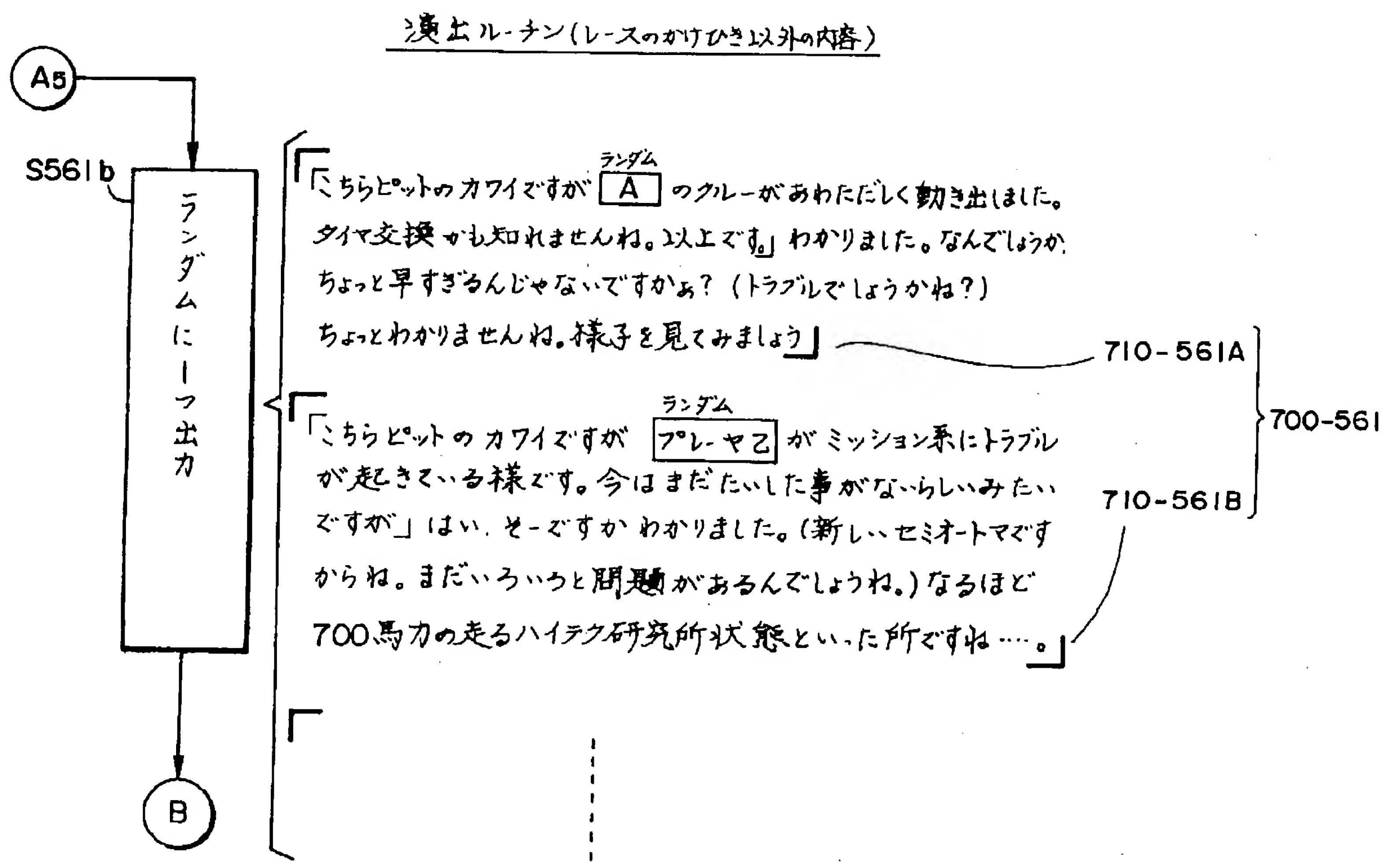
[Drawing 16]


ゴール ルーチン
A3
S541a
トップと2位が40m以内にいるか？
Y
N
S541b
ランダムに1つ出力
S542b
ランダムに1つ出力
S543b
ランダムに1つ出力
C
800
ロードポジション
「さあ!! 最終コーナー をぬけていよいよゴールだあー。最後までわからないぞ!!」
710-541A
「すごいバトルだ。すごいバトルのまま、いよいよゴールをむかえようとしています。トップの トップ車 プレーヤ乙 2位の 2位車 プレーヤ甲」
710-541B
710-541C
700-541
800
「さあ最終だ! このままゴールするのか トップ車 プレーヤ乙 奇蹟がおこるか 2位車 プレーヤ甲」
ロードポジション
「いよいよ 最終コーナー をぬけて ゴールに向っています。トップ車 プレーヤ乙 堂々の1位です。ファンに右手をふっています。余裕があります。トップ車 プレーヤ乙。」
710-542A
700-542
「ほとんど独走体制の トップ車 プレーヤ乙 余裕の走りでゴールに向っている。20万人のファンの声援の中期待にこたえてついに勝利を向かえました。」
710-542B
「優勝!! トップ車 プレーヤ乙、ついにやりました。(昨年とくらべてずいぶん腕をあげましたね) そうですね。マシン+テクニックも絶好調。 鈴鹿 スズカ サーキットでついに勝利をむかえました。2位 2位車 プレーヤ甲 3位 3位車 B，4位 4位車 A となりました。(いやすごいレースでしたね) ではまた来週!!」
710-543A
700-543
「------------------------」

[Drawing 17]


アクシデントルーチン
A4
S551a
スピン？
Y
N
S551b
ランダムに1つ出力
B
800
スピン車
ロードポジション
800
「おっとー A 、2コーナー あたりで大スピンだぁー。たて直してすぐ走り出したが問題ないかー？（タイヤにフラットスポットができたかも知れませんね）大丈夫でしょうか？」
スピン車
ロードポジション
「あっ！ プレーヤ甲 でしょうか？ これは…（そうですね）3コーナー あたりでスピンです。」
710-551A
710-551B
700-551
S552a
コースアウト？
Y
N
S552b
ランダムに1つ出力
B
コースアウト車
「おっとー！コースアウトしているのは A だ！（今のはブレーキングミスでしょう）ちょっと疲れが出たか A 」
コースアウト車
「おっ！ A 、コースアウトか？（ブレーキ系のトラブルかも知れませんね これは）コースにもどって行きますが…（大丈夫の様ですね）何事もなかったかの様にフル加速していく A だぁーっ」
コースアウト車
「おっと！ A 、コースアウト，（ブレーキングが甘いですね）甘いですか….。（気持だけ先へ先へ行っちゃてる，ていう感じですね。ここはもっと落ちついて走ってもらいたい所ですね。）なるほど….」
710-552A
710-552B
710-552C
700-552
S553a
接触？
クラッシュ？
Y
N
S553b
ランダムに1つ出力
B
B
接触車前
接触車後
ロードポジション
「おっと接触か？ プレーヤ甲 と A ，スプーンカーブ あたりで接触したもよう。大丈夫の様ですが….（ヒヤリとしますね）」
接触車前
接触車後
接触車前
接触車前
「おおっ プレーヤ甲 と A が接触だーっ。プレーヤ甲 おこっているぞ．プレーヤ甲 おこっているーっ!!」
710-553A
710-553B
700-553

[Drawing 18]

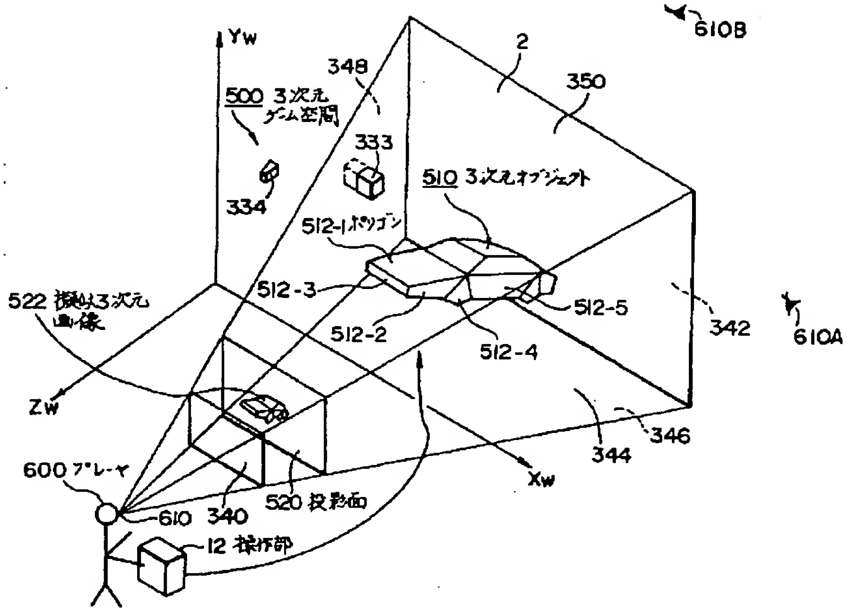


演出ルーチン（レースのかけひき以外の内容）

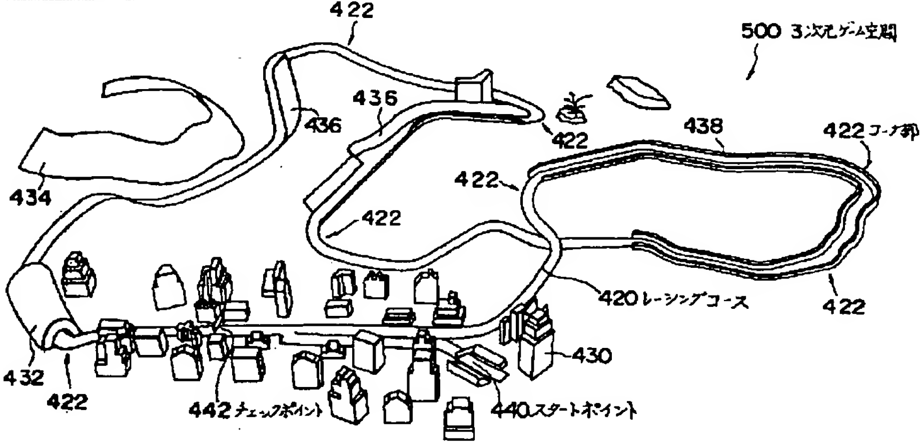
「こちらピットのカワイですが ランダム A のクルーがあわただしく動き出しました。タイヤ交換かも知れませんね。以上です。」わかりました。なんでしょうか、ちょっと早すぎるんじゃないですかぁ？（トラブルでしょうかね？）ちょっとわかりませんね。様子を見てみましょう」

「こちらピットのカワイですが ランダム プレーヤZ がミッション系にトラブルが起きている様です。今はまだたいした事がないらしいみたいですが」はい、そーですか わかりました。（新しいセミオートマですからね。まだいろいろと問題があるんでしょうね。）なるほど700馬力の走るハイテク研究所状態といった所ですね….。」

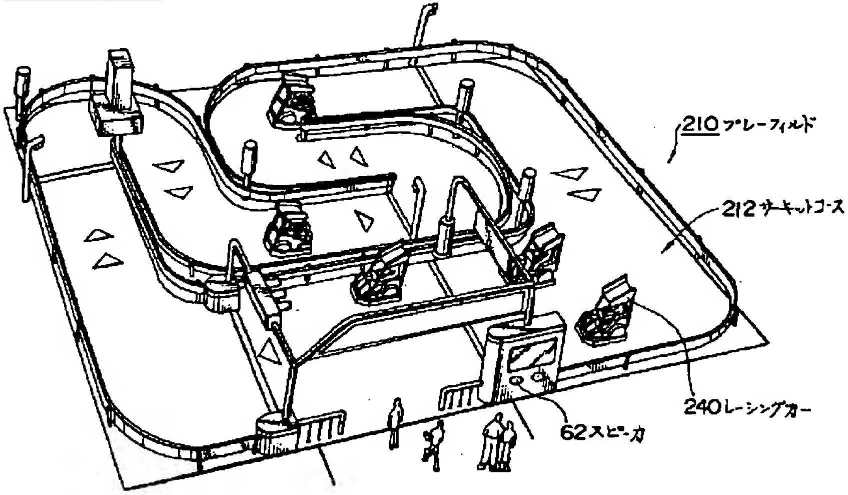
A5
S561b
ランダムに一つ出力
B
710-561A
710-561B
700-561


Yw
348
500 3次元ゲーム空間
333
2
350
610B
510 3次元オブジェクト
334
512-1 ポリゴン
512-3
512-5
342
610A
522 擬似3次元画像
512-2
512-4
Zw
344
346
Xw
600 プレーヤ
610
340
520 投影面
12 操作部

[Drawing 19]


422
500 3次元ゲーム空間
436
436
422
438
422 コーナ部
434
422
422
422
420 レーシングコース
422
430
432
422
442 チェックポイント
440 スタートポイント

[Drawing 21]


210 プレーフィールド
212 サーキットコース
240 レーシングカー
62 スピーカ

[Translation done.]